



**Institute of Physical Chemistry
Polish Academy of Sciences**

LIST OF PAPERS

2005

Warsaw, 2006

PL ISSN 0239-4391

Compiled by Małgorzata Krajewska
Institute of Physical Chemistry of the Polish Academy of Sciences
ul.Kasprzaka 44/52, 01-224 Warsaw, Poland

**INSTITUTE OF PHYSICAL CHEMISTRY
OF THE POLISH ACADEMY OF SCIENCES**

ADDRESSES:

01-224 Warsaw, ul.Kasprzaka 44/52

CABLE ADDRESSES:

Telephone: +48 22 343 31 08

Telefax: +48 22 343 33 33

Komertel tel/fax: +48 22 631 16 19

E-mail: ichf@ichf.edu.pl

Internet <http://ichf.edu.pl>

DIRECTOR:

Professor Aleksander Jabłoński
phone: +48 22 343 31 08

DEPUTY DIRECTORS:

Associate Professor Jerzy Herbich
phone: +48 22 343 31 09

Associate Professor Stanisław Filipek
phone: +48 22 343 31 09

Assistant Professor Kinga Suwińska
phone: +48 22 343 31 09

CONTENTS

	Page
DEPARTMENT I Physical Chemistry of Solids	5
DEPARTMENT II Physical Chemistry of Supramolecular Complexes.....	11
DEPARTMENT III Soft Condensed Matter and Fluids	47
DEPARTMENT IV Chemical Dynamics	55
DEPARTMENT V Catalysis on Metals.....	60
DEPARTMENT VI Electrochemistry, Corrosion and Applied Surface Sciences	67
DEPARTMENT VII Electrode Processes	100
DEPARTMENT VIII Electrochemical Oxidation of Gaseous Fuels (Cracow)...	108
DEPARTMENT IX Photochemistry and Spectroscopy	111
DEPARTMENT X Quantum Theory of Solids and Molecules.....	128
CHEMIPAN Research & Development Laboratories	132
MISCELLANEA	134
EDITORIAL ACTIVITY	135
MEMBERSHIP IN INTERNATIONAL ORGANIZATIONS	138
AUTHORS' INDEX	140

DEPARTMENT I
PHYSICAL CHEMISTRY OF SOLIDS

Head of the Department: doc. dr hab. Stanisław M. Filipek
Phone: +48 22 343 33 34

**PAPERS PUBLISHED IN SCIENTIFIC JOURNALS
AND PROCEEDINGS OF SCIENTIFIC CONFERENCES**

- 1. Baranowski B., Dębowska L.**
Limited penetration depths of hydrides in cylindrical Pd-Ni alloys samples.
Polish J. Chem., **79**, 783-787 (2005).
- 2. Baranowski B., Filipek S.M.**
45 years of nickel hydride – history and perspectives.
J. Alloys Compd., **404-406**, 2-6 (2005).
- 3. Baranowski B., Filipek S.M.**
45 years of nickel hydride.
Polish J. Chem., **79**, 789-806 (2005).
- 4. Dudek D.**
The diffusion of hydrogen and deuterium through self-stressed Pd₇₇Ag₂₃ membrane.
J. Alloys Compd., **404-406**, 243-246 (2005).
- 5. Dudek D.**
The influence of self-stresses on the deuterium diffusion in Pd₇₇Ag₂₃ membrane.
Collect. Czech. Chem. Commun., **70**, 1-10 (2005).

6. **Filipek S.M.**
High pressure studies of metal-hydrogen systems.
水素—金属系の高圧研究.
J. Adv. Sci., **17**, 201-208 (2005).
7. **Palasyuk T., Tkacz M.**
Hexagonal to cubic phase transition in YH₃ under high pressure.
Solid State Commun., **133/7**, 477-480 (2005).
8. **Palasyuk T., Tkacz M.**
Pressure-induced structural phase transition in rare-earth trihydrides.
Part I. (GdH₃, HoH₃, LuH₃).
Solid State Commun., **133/7**, 481-485 (2005).
9. **Palasyuk T., Tkacz M., Vajda P.**
High pressure studies of the erbium-hydrogen system.
Solid State Commun., **135/4**, 226-231 (2005).
10. **Paul-Boncour V., Filipek S.M., Dorogova M., Bourée F., André G., Marchuk I., Percheron-Guégan A., Liu R.S.**
Neutron diffraction study, magnetic properties and thermal stability of YMn₂D₆ synthesised under high deuterium pressure.
J. Solid State Chem., **178**, 356-362 (2005).
11. **Szafrański A.W.**
Influence of hydrogen on electron transport of palladium alloyed with silver.
J. Alloys Compd., **395**, 36-40 (2005).
12. **Szafrański A.W.**
Transport properties of some hydrogenated nickel-based alloys.
J. Alloys Compd., **404-406**, 195-199 (2005).
13. **Tkacz M., Burtovyy R.**
Isotope effect in Cu-H(D) system with hexagonal hydride phase.
J. Alloys Compd., **404-406**, 368-371 (2005).

14. **Wiesinger G., Paul-Boncour V., Filipek S.M., Reichl Ch., Marchuk I., Percheron-Guégan A.**
Structural and magnetic properties of RFe_2D_x deuterides ($R= Zr, Y$ and $x \geq 3,5$) studied by means of neutron diffraction and ^{57}Fe Mössbauer spectroscopy.
J Phys.: Condens. Matter, **17**, 893-908 (2005).
15. **杉浦 央 (Sugiura H.), Filipek S.M.**
Laves相水素化物の圧縮 (Compression of Laves phase hydrides)
横浜市立大学 自然科学系列 56巻合併1-2号別刷り
Reports of Yokohama City University, **56**, 37-50 (2005).

PAPERS IN PRESS IN SCIENTIFIC JOURNALS

1. **Baranowski B., Dębowska L.**
Simple relations between superconducting transition temperatures and corresponding hydrogen activities of palladium hydride samples.
Polish J. Chem.,
2. **Baranowski B., Dębowska L.**
Some remarks on superconductivity in PdH.
J. Alloys Compd.,

LECTURES AND COMMUNICATIONS PRESENTED AT SCIENTIFIC CONFERENCES

1. **Baranowski B., Dębowska L.**
Formation and decomposition of metal hydrides treated as coherent and incoherent phenomena.
IX International Conference: "Hydrogen Mater. Sci. & Chemistry of Carbon Nanomaterials", Sevastopol, Ukraine, 2005.
2. **Baranowski B., Dębowska L.**
Penetration depth of the hydride phase in cylindrical Ni-Pd alloys.
IX International Conference: "Hydrogen Mater. Sci. & Chemistry of Carbon Nanomaterials", Sevastopol, Ukraine, 2005.

- 3. Baranowski B., Dębowska L.**
Formation and decomposition of metal hydrides treated as coherent and incoherent phenomena.
Polish-France Conference of Chemical Thermodynamics, Carry le Rouet, France, 2005.
- 4. Baranowski B., Dębowska L.**
Relations between superconducting transition temperatures and corresponding hydrogen activities of palladium hydride (deuteride) samples.
IX International Conference: "Hydrogen Mater. Sci. & Chemistry of Carbon Nanomaterials", Sevastopol, Ukraine, 2005.
- 5. Filipek S.M., Paul-Boncour V., Liu R.S., Sugiura H., Tsutaoka T., Marchuk I., Mylswamy S., Wierzbicki R., Sato R.**
Studies of novel hydrides synthesized under hydrogen pressure.
IX International Conference: "Hydrogen Mater. Sci. & Chemistry of Carbon Nanomaterials", Sevastopol, Ukraine, 2005.
- 6. Filipek S.M., Paul-Boncour V., Liu R.S., Mylswamy S., Wierzbicki R.**
Novel hydrides of RMn_2 Laves phases synthesized under hydrogen pressure.
Joint 20-AIRAPT&43-EHPRG Conference on High Pressure Science and Technology, Karlsruhe, Germany, 2005.
- 7. Filipek S.M., Paul-Boncour V., Liu R.S., Percheron-Guégan A., Yang H.D., Latroche M., Marchuk I., Mylswamy S., Wierzbicki R.**
Interaction of compressed hydrogen with alloys: amorphisation, decomposition and formation of novel hydrides.
8th International Symposium on Electrochemical/Chemical Reactivity of Metastable Materials, Szeged, Hungary, 2005 (*invited lecture*).
- 8. Marchuk I., Filipek S.M., Paul-Boncour V., Liu R.S., Tsutaoka T., Dorogova M.**
Nowe wodorki związków międzymetalicznych: synteza i własności.
XLVIII Zjazd PTChem i SITPChem, Poznań, Poland, 2005.

9. **Marchuk I., Havela L., Kolomiets A.V., Miliyanchuk K., Filipek S.M.**
Synthesis and magnetic properties of UCoAlH_4 .
Joint 20-AIRAPT&43-EHPRG Conference on High Pressure Science and Technology, Karlsruhe, Germany, 2005.
10. **Marchuk I., Havela L., Kolomiets A.V., Miliyanchuk K., Filipek S.M.**
High pressure studies of uranium intermetallics-hydrogen systems.
IX International Conference: "Hydrogen Mater. Sci. & Chemistry of Carbon Nanomaterials", Sevastopol, Ukraine, 2005.
11. **Palasyuk T., Tkacz M.**
Pressure-induced phase transitions in rare earth.
Gordon Research Conference on Hydrogen-Metal Systems, Colby College in Waterville, Maine, USA, 2005.
12. **Palasyuk T., Tkacz M.**
Pressure-induced phase transitions in some lanthanide trihydrides.
Joint 20-AIRAPT&43-EHPRG Conference on High Pressure Science and Technology, Karlsruhe, Germany, 2005 (*invited lecture*).
13. **Palasyuk T., Tkacz M.**
Pressure induced phase transition in yttrium and some rare earth trihydrides.
Study of Matter at Extreme Conditions (SMEC), Miami, Florida, USA, 2005 (*invited lecture*).
14. **Palasyuk T., Tkacz M.**
Pressure induced phase transitions in the yttrium and lanthanide trihydrides.
II Warsaw Seminar for PhD Students in Chemistry - ChemSession'05.
University of Warsaw, Chemistry Department, Warsaw, Poland, 2005.
15. **Paul-Boncour V., Mylswamy S., Liu R.S., Wierzbicki R., Marchuk I., Filipek S.M., Yang H.D.**
Novel intermetallic hydrides and their structural investigation.
Chemical Society Located in Taipei, Annual Meeting 2005, National Sun Yat-Sen University, Kaohsiung, Taiwan, 2005.

16. **Paul-Boncour V., Mylswamy S., Liu R.S., Wierzbicki R., Marchuk I., Filipek S.M., Yang H.D.**
Studies of novel RM_2 hydrides ($R=Y, Dy, Er$).
The 2005 Annual Conference of the Chinese Society for Material Science, Taiwan, 2005.
17. **Tkacz M.**
New materials for hydrogen storage.
21st European Symposium on Applied Thermodynamics, Jurata, Poland, 2005.
18. **Zavaliy I.Yu., Denys R.V., Koval'chuk I.V., Delaplane R.G., Marchuk I.**
Crystal structure analysis of $Ti_{4-x}Zr_xFe_2O_y$ deuterides.
IX International Conference: "Hydrogen Mater. Sci. & Chemistry of Carbon Nanomaterials", Sevastopol, Ukraine, 2005.

**INVITED LECTURES PRESENTED AT UNIVERSITIES AND
OTHER SCIENTIFIC CENTERS (UNPUBLISHED)**

1. **Baranowski B.**
Nadprzewodnictwo wodoru palladu.
Institute of Physics of Solids RAN, Czernogolovka, Russia, 2005.
2. **Filipek S.M.**
High pressure studies of metal-hydrogen systems.
Yuan Zi University, Zhungli, Taiwan, 2005.
3. **Filipek S.M.**
高压研究、水素化物、高压条件下における水素について (Kooatsu-kenkyuu, suisokabutsu, kooatsu-jookenka-ni okeru suiso-ni tsuite; „About high pressure, hydrides and hydrogen under high pressure”) – in Japanese, Tokai University, Tokio, Japan 2005.

DEPARTMENT II

PHYSICAL CHEMISTRY OF SUPRAMOLECULAR COMPLEXES

Head of the Department: prof. dr hab. Janusz Lipkowski
Phone: +48 22 343 32 13

MONOGRAPHS

1. **Gierycz P., Mączyński A., Góral M., Oracz P., Bok A.,
Wiśniewska-Gocłowska B.**
Recommended Vapor-Liquid Equilibria and Liquid-Liquid Equilibria.
Floppy Book and Manual of Floppy Book.
Wydawnictwo Fundacji im. W. Świątosławskiego, Warsaw, Poland,
2005, pp. 54.
2. **Zielenkiewicz W.**
Calorimetry.
Institute of Physical Chemistry, Polish Academy of Science, Warsaw,
Poland, 2005, pp. 336.

PAPERS PUBLISHED IN SCIENTIFIC JOURNALS AND PROCEEDINGS OF SCIENTIFIC CONFERENCES

1. **Asztemborska M., Kaczmarski K., Zbaraża E., Kowalska T.,
Głód B.K.**
Vacant reversed phase high performance liquid chromatography (vRP-
HPLC).
Proc. of the XXIXth Symposium “Chromatographic Methods of
Investigating the Organic Compounds”, 51-53, 2005.

2. **Basok S.S., Croitoru L., Fonari M.S., Ganin E.V., Gelmboldt V.O., Lipkowski J., Simonov Yu.A.**
A new phase of 7,16-dibenzyl-1,4,10,13-tetraoxa-7,16-diazacyclooctadecane, and 7,16-di-benzyl-1,4,10,13-tetraoxa-7,16-diazoniacyclooctadecane bis(tetra-fluoroborate) monohydrate, both determined at 123 K.
Acta Cryst., **C61**, 188-192 (2005).
3. **Bessieres D., Lafitte T., Daridon J.-L., Randzio S.L.**
High pressure thermal expansion of gases: Measurement and calibration.
Thermochim. Acta, **428**, 25-30 (2005).
4. **Bielejewska A., Duszczyk K., Żukowski J.**
Effect of (+) or (-) camphorsulfonic acid additives to the mobile phase on enantio separations of some basic drugs on a Chiralcel OD column.
J. Chromatogr. A, **1083**, 133-140 (2005).
5. **Bielejewska A., Duszczyk K., Żukowski J.**
HPLC separation of linezolid enantiomers using polysaccharide-based chiral stationary phases.
Acta Chromatogr., **15**, 183-191 (2005).
6. **Bielejewska A., Glód B.K.**
RP-HPLC separation of acetic and trifluoroacetic acids using mobile phase with ion interaction reagent and without buffer.
Chem. Anal.-Warsaw, **50**, 387-395 (2005).
7. **Bobbo S., Scattolini M., Camporese R., Fedele L., Stryjek R.**
Solubility of carbon dioxide in pentaerytritol esters.
Proc. IIR Intern. Conf. Thermophysical Properties and Transfer Processes of Refrigerants, Vicenza, 2005, pp. 193-200.
8. **Boyko V., Rodik R., Danylyuk O., Tsymbal L., Lampeka Y., Suwińska K., Lipkowski J., Kalchenko V.**
Tetrazolecalix[4]arenes as new ligands for palladium(II). *Tetrahedron*, **61**, 12282–12287 (2005).

9. **Cecillon S., Lazar A., Suwińska K., Danylyuk O., Rather B., Zaworotko M., Coleman A.W.**
Highly stable one dimensional inclusion polymer of mono-substituted calix[4]arene in different media.
Chem. Commun., 2442–2444 (2005).
10. **Costes J.-P., Dahan F., Novitchi G., Arion V., Shova S., Lipkowski J.**
Macrocyclic and open-chain $\text{Cu}^{\text{II}}-4\text{f}(4\text{f}=\text{Gd}^{\text{III}}, \text{Ce}^{\text{III}})$ complexes with planar diamino chains: structures and magnetic properties.
Eur. J. Inorg. Chem., 1530-1537 (2004).
11. **D'Souza F., Rogers L.M., O'Dell E.S., Kochman A., Kutner W.**
Immobilization and electrochemical redox behavior of cytochrome *c* on the fullerene film modified electrodes.
Bioelectrochemistry, **66**, 35-40 (2005).
12. **D'Souza F., Rogers L.M., O'Dell E.S., Kochman A., Kutner W.**
Surface immobilization and characterization of cytochrome *c* on fullerene modified electrodes, in Fullerenes and Nanotubes: Materials for the New Chemical Frontier. Proceedings of the International Symposium on Fullerenes, Nanotubes, and Carbon Nanoclusters of the 205th Meeting of the Electrochemical Society, Fullerenes vol. 14, eds P.V. Kamat, D.M. Guldi, F. D'Souza, S. Fukuzumi, The Electrochemical Society Proceedings vol. 12 (2004), pp. 1-9. The Electrochemical Society, Pennington, USA, 2005.
13. **Di Nicola G., Giuliani G., Polonara F., Stryjek R.**
 PVT_x measurements for $\text{N}_2\text{O} + \text{CH}_3\text{F}$, $+ \text{CH}_2\text{F}_2$ and $+ \text{CHF}_3$ binary systems.
Fluid Phase Equilibr., **230**, 81-89 (2005).
14. **Di Nicola G., Giuliani G., Polonara F., Stryjek R.**
Blends of carbon dioxide and HFCs as working fluids for the low-temperature circuit in cascade refrigerating system.
Int. J. Refrig., **28**, 130-140 (2005).
15. **Di Nicola G., Giuliani G., Polonara F., Stryjek R.**
Blends of CO_2 and N_2O as working fluids in cascade cycles.
Proc. IIR Intern. Conf. Commercial Refrigeration, Vicenza, 203-210, (2005).

- 16. Di Nicola G., Giuliani G., Polonara F., Stryjek R.**
Isochoric PVT_x measurements for the CO₂ + N₂O system.
J. Chem. Eng. Data, **50**, 656-660 (2005).
- 17. Di Nicola G., Giuliani G., Polonara F., Stryjek R.**
PVT from the Burnett and isochoric measurements. Nitrous oxide.
J. Thermal Anal. Cal., **80**, 311-316 (2005).
- 18. Di Nicola G., Giuliani G., Polonara F., Stryjek R.**
PVT_x and VLE properties of refrigerant mixtures from isochoric and
Burnett experiments.
Proc. IIR Intern. Conf. Thermophysical Properties and Transfer
Processes of Refrigerants, Vicenza, 129-136 (2005).
- 19. Di Nicola G., Polonara F., Ricci R., Stryjek R.**
PVT_x measurements for the R116 + CO₂ and R41 + CO₂ systems.
New isochoric apparatus.
J. Chem. Eng. Data, **50**, 312-318 (2005).
- 20. Fedele L., Bobbo S., Camporese R., Stryjek R.**
Vapour-liquid equilibrium measurements and correlation for the
pentafluoroethane (R125) + *n*-butane (R600) system.
Fluid Phase Equilibr., **227**, 275-282 (2005).
- 21. Fedele L., Bobbo S., De Stefani V., Camporese R., Stryjek R.**
Isothermal VLE measurements for difluoromethane + dimethyl ether
and an evaluation of hydrogen bonding.
J. Chem. Eng. Data, **50**, 128-132 (2005).
- 22. Fedele L., Bobbo S., Scattolini M., Camporese R., Stryjek R.**
Vapor-liquid equilibrium for the difluoromethane (R32) + *n*-butane
system.
J. Chem. Eng. Data, **50**, 44-48 (2005).
- 23. Gierycz P.**
Applicability of the NRTL_mKW method for prediction of binary and
ternary vapour-liquid equilibria data.
Polish J. Chem., **79**, 1503-1511 (2005).

- 24. Gierycz P.**
Prediction of the excess Gibbs energy from excess enthalpy data for binary mixtures containing alcohols and hydrocarbon.
Proceedings of 'ECCTAE'2005 - European Conference on Calorimetry and Thermal Analysis for Environment, (ed. I. Zięborak-Tomaszkiewicz)
Institute of Physical Chemistry PAS, Poland, Warsaw, 25-30 (2005).
- 25. Gierycz P.**
Prediction of thermodynamic properties from excess enthalpy data.
in: 'Thermodynamics for Environment', eds. P.Gierycz, I.Zięborak-Tomaszkiewicz,
Institute of Physical Chemistry PAS Warsaw, Poland, 77-94 (2005).
- 26. Gregorowicz J.**
Adsorption of eicosane and 1,2-hexanediol from supercritical carbon dioxide on activated carbon and chromosorb.
Fluid Phase Equilibria, **238**, 142–148 (2005).
- 27. Gregorowicz J., Fraś Z., Łuszczuk M.**
Measurements of phase equilibria in asymmetric mixtures at high pressures. Experimental setup and introductory measurements.
Polish J. Chem., **79**, 1339–1351 (2005).
- 28. Hsiou Y.F., Yang Y.J., Stobiński L., Watson Kuo, Chen C.D.**
On the ohmic contact between multiwalled carbon nanotubes and nano-electrodes.
Chinese J. Phys., **43**, 293-298 (2005).
- 29. Kalchenko O., Poznański J., Marcinowicz A., Cherenok S., Solovyov A., Zielenkiewicz W., Kalchenko V.**
Complexation of the upper rim phosphorylated calix[4]arenes with uracil and adenine derivatives in water containing solutions.
J. Phys. Org. Chem., **18**, 578-585 (2005).

- 30. Kędra-Królik K., P.Gierycz P.**
Modelling of gas – liquid – solid reaction in the new rotating disc precipitation reactor.
Proceedings of 'ECCTAE'2005 - European Conference on Calorimetry and Thermal Analysis for Environment, (ed. I. Zięborak-Tomaszkiewicz)
Institute of Physical Chemistry PAS, Poland, Warszawa, 101-106 (2005).
- 31. Kosior M., Kwiatkowski P., Asztemborska M., Jurczak J.**
Stereochemistry of the Diels-Alder reaction at high pressure: diastereo- and enantioselective [4+2]cycloaddition of buta-1,3-diene to glyoxylic acid derivatives catalysed by (salen) chromium(III) complexes.
Tetrahedron: Asymmetry, **16**, 2897-2900 (2005).
- 32. Koźbial M., Lipkowski J., Poznański J., Utzig E.**
Conduction and titration microcalorimetry and H^1 NMR studies on the complexing ability of D-mannonafto-crown-6-ether and enantiomeric amino acids.
Proceedings of 'ECCTAE'2005 - European Conference on Calorimetry and Thermal Analysis for Environment, (ed. I. Zięborak-Tomaszkiewicz)
Institute of Physical Chemistry PAS, Warsaw, Poland, 47-52 (2005).
- 33. Kravtsov V.Ch., Weber E., Simonov Yu.A., Lipkowski J., Trepte J., Ganin E.V.**
Heterocalix[8]arene inclusion complexes: crystal structure and mobility of the host shape.
J. Struct. Chem., **46**, 47-51 (2005).
- 34. Krinichnaya E.P., Moravsky A.P., Efimov O.N., Sobczak J.W., Winkler K., Kutner W., Balch A.L.**
Mechanistic studies of the electrochemical polymerization of C_{60} in the presence of dioxygen or $C_{60}O$.
J. Mater. Chem., **15**, 1468-1476 (2005).

- 35. Kutner W., Pięta P., Nowakowski R.¹, Sobczak J.W.², Kaszkur Z.³, McCarty A.L., D'Souza F.**
Composition, structure, surface topography and electrochemical properties of electrophoretically deposited nanostructured fullerene films.
Chem. Mater., **17**, 5635-5645 (2005).
- 36. Kutner W., Pięta P., Nowakowski R.⁴, Sobczak J.W.⁵, Kaszkur Z.⁶, McCarty A.L., D'Souza F.**
Preparation, surface characteristics and electrochemical properties of electrophoretically deposited C₆₀ films.
Electronic Properties of Novel Nanostructures, ed. H. Kuzmany, J. Fink, M. Mehring and S. Roth, American Institute of Physics, 2005, p. 13-16.
- 37. Kwatereczak A., Bielejewska A.**
Comparison of retention of native cyclodextrins and its permethylated derivatives on porous graphite carbon and silica C-18 stationary phases.
Anal. Chim. Acta, **537**, 41-46 (2005).
- 38. Kwiatkowski P., Chaładaj W., Malinowska M., Asztemborska M., Jurczak J.**
The high-pressure [4+2]cycloaddition of 1-methoxybuta-1,3-diene to the glycoaldehyde-derived heterodienophiles, catalyzed by chiral metallosalen complexes.
Tetrahedron: Asymmetry, **16**, 2959-2964 (2005).
- 39. Lewiński J., Bury W., Justyniak I.**
Significance of intermolecular S⋯C(ππ) interaction involving M-S and -C=O centers in crystal structures of metal thiolate complexes.
Eur. J. Inorg. Chem., 4499-4492 (2005).

¹ Department IV

² Department VI

³ Department V

⁴ Department IV

⁵ Department VI

⁶ Department V

- 40. Lewiński J., Bury W., Kopec T., Tratkiewicz E., Justyniak I., Lipkowski J.**
Unprecedented coordination mode variation of group 13 metal–alkyl compounds derived from methyl thiosalicylate.
Eur. J. Inorg. Chem., 3414-3417 (2005).
- 41. Lewiński J., Dranka M., Kraszewska I., Śliwiński W., Justyniak I.**
Divergent coordination mode of magnesium and zinc alkyls supported by the bifunctional pyrrolylaldiminato ligand.
Chem. Commun., 4935-4937 (2005).
- 42. Lewiński J., Horeglad P., Tratkiewicz E., Justyniak I., Ochal Z.**
Ring-opening of 2,3-epoxy-1-propanol with R_3Al : Unprecedented regiochemical switching simply achieved by changing alkyl substituents of aluminium reagent.
J. Organomet. Chem., **690**, 3697-3699 (2005).
- 43. Lewiński J., Horeglad P., Wójcik K., Justyniak I.**
Chelation effect in polymerization of cyclic esters by metal alkoxides: structure characterization of the intermediate formed by primary insertion of lactide into the Al-OR bond of an organometallic initiator.
Organometallics, **24**, 4588-4593 (2005).
- 44. Lewiński J., Zachara J., Justyniak I., Dranka M.**
Hydrogen-bond supramolecular structure of group 13 Schiff base complexes.
Coord. Chem. Rev., **249**, 1185-1199 (2005).
- 45. Lewiński J., Zachara J., Starowieyski K.B., Justyniak I., Lipkowski J., Bury W., Kruk P., Woźniak R.**
A second polymorphic form of trimethylindium: topology of supramolecular architectures of group 13 trimethyls.
Organometallics, **24**, 4832-4837 (2005).
- 46. Lin C.R., Su C.H., Hung C.H., Chang C.Y., Stobiński L.**
Characterization of bamboo-like CNTs prepared using sol-gel catalyst.
Diamond & Related Materials, **14**, 794-797 (2005).

- 47. Lipkowski J.**
Hydrofobic hydration – ecological aspects.
in: 'Thermodynamics for Environment', eds. P.Gierycz, I.Zięborak-Tomaszkiewicz,
Institute of Physical Chemistry PAS Warsaw, Poland, 163-180 (2005).
- 48. Lipkowski J., Andronati K.S., Simonov Yu.A., Kravtsov V.Ch.**
Peculiarities of inclusion complex formation in the
1,4-benzodiazepine- benzene system.
J. Struct. Chem., **46**, 115-118 (2005).
- 49. Lipkowski J., Komarov V.Yu., Rodionova T.V., Aladko L.S.**
X-ray investigation of compounds crystalized in aqueous solution of
tetrabutylammonium laurate. The structure III of
(C₄H₉)₄N(C₁₁H₂₃COO)₃C₁₁H₂₃COOH 4H₂O (in russ.).
J. Struct. Chem., **46**, 52-58 (2005).
- 50. Lubomska M., Gierycz P., Rogalski M.**
Enhancement of the anthracene aqueous solubility by a synergistic
effect of alcohols and β-cyclodextrin.
Fluid Phase Equilibr., **238**, 39-44 (2005).
- 51. Luboradzki R., Pakulski Z., Sartowska B.**
Glucofuranose derivatives as a library for designing and investigating
low molecular mass organogelators.
Tetrahedron, **61**, 10122-10128 (2005).
- 52. Mahmoud R., Gierycz P., Solimando R., Rogalski M.**
Calorimetric probing of n-alkane - petroleum asphaltene interactions.
Energy & Fuels, **19**, 2474-2479 (2005).
- 53. Morak B., Pluta K., Suwińska K., Grymel M., Besnard C.,
Schiltz M., Kloc C., Siegrist T.**
Synthesis and structure of dipyrido-1,4-dithiins.
Heterocycles, **65**, 2619-2634 (2005).
- 54. Pârvulescu A.N., Marin G., Suwińska K., Kravtsov V.Ch., Andruh
M., Pârvulescu V., Pârvulescu V.I.**
A polynuclear complex, [Cu(bpe)₂](NO₃), with interpenetrated
diamondoid networks: synthesis, properties and catalytic behavior.
J. Mater. Chem., **15**, 4234–4240 (2005).

- 55. Polaczek E., Tomasik P.J., Mazurkiewicz J., Wrzalik R., Stobiński L., Tomasik P., Lin H.-M.**
Interactions of single-walled carbon nanotubes with monosaccharides.
J. Nanosci. Nanotechnol., **5**, 479-483 (2005).
- 56. Poznański J.**
Partial molar volume as an important thermodynamic parameter.
Application for uracil methyl derivatives.
J. Mol. Liq., **121**, 15-20 (2005).
- 57. Poznański J.**
The role of aqueous solvent in stabilization/destabilization inter- and intramolecular interactions.
in: "Thermodynamics for Environment", eds. P.Gierycz, I.Zięborak-Tomaszkiewicz,
Institute of Physical Chemistry PAS Warsaw, Poland, 181-196 (2005).
- 58. Poznański J., Szymański J., Basińska T., Słomkowski S., Zielenkiewicz W.**
Aggregation of aqueous lysozyme solutions followed by dynamic light scattering and ¹H NMR spectroscopy.
J. Mol. Liq., **121**, 21-26 (2005).
- 59. Poznański J., Wszelaka-Rylik M., Zielenkiewicz W.**
HEW lysozyme salting by high concentration NaCl solutions followed by titration calorimetry.
Biophys. Chem., **113**, 137-144 (2005).
- 60. Radul O.M., Malinowski S.T., Luboradzki R., Makaiev S.Z.**
Kristalliczeskaia struktura supramolekularnoi systemy 1-(2-oksopropil)-3-etylenketala indolidiona-2,3 i jego tiosemikarbazona.
Krisallografiya, **50**, 996-1000 (2005).
Crystal structure of the supramolecular system of indole-2,3-dione 1-(2-oxopropyl)-3-ethylene ketal and its thiosemicarbazone.
Crystallogr Rep+, **50**, 923-927 (2005).
- 61. Randzio S.L., Orłowska M.**
Simultaneous and *in situ* analysis of thermal and volumetric properties of starch gelatinization over wide pressure and temperature ranges.
Biomacromolecules, **6**, 3045-3050 (2005).

- 62. Rodik R., Boiko V., Danylyuk O., Suwińska K., Tsymbal I., Slinchenko N., Babich L., Shlykov S., Kosterin S., Lipkowski J., Kalchenko V.**
Calix[4]arenesulfonylamidines. Synthesis, structure and influence on Mg^{2+} , ATP- dependent calcium pumps.
Tetrahedron Lett., **46**, 7459–7462 (2005).
- 63. Simonov Yu.A., Fonari M.S., Duca G.G., Gonta M.V., Ganin E.V., Yavolovskii A.A., Gdaniec M., Lipkowski J.**
Nitrosation of hydrochlorothiazide and the modes of binding of the N-nitroso derivative with two macrocycles possessing an 18-membered crown ether cavity.
Tetrahedron, **61**, 6596-6601 (2005).
- 64. Skórka M., Asztemborska M., Żukowski J.**
Thermodynamic studies of complexation and enantio recognition processes of monoterpenoids by α - and β -cyclodextrin in gas chromatography.
J. Chromatogr. A, **1078**, 136-143 (2005).
- 65. Soldatov D.V., Sokolov I.E., Suwińska K.**
Molecular ladders with binuclear bis-chelate platforms. (in russ.)
J. Struct. Chem., **46**, 155–160 (2005).
- 66. Świerczyński D., Luboradzki R., Dolgonos G., Lipkowski J., Schneider H.J.**
Non-covalent interactions of organic halogen compounds with aromatic systems - analyses of crystal structure data.
Eur. J. Org. Chem., **11**, 1172-1177 (2005).
- 67. Świerzewski R., Zielenkiewicz W.**
The thermodynamics of lysozyme-PEG system. Macromolecular crowding aspect.
Proceedings of 'ECCTAE'2005 - European Conference on Calorimetry and Thermal Analysis for Environment, (ed. I. Zięborak-Tomaszkiewicz)
Institute of Physical Chemistry PAS, Warsaw, Poland, 31-36 (2005).

- 68. Szymański J., Basińska T., Słomkowski S., Zielenkiewicz W.**
Microcalorimetric, volumetric and dynamic light scattering studies on nucleating ovalbumin solution.
J. Mol. Liq., **121**, 58-61 (2005).
- 69. Taraszewska J., Koźbiał M.**
Complexation of ketoconazole by native and modified cyclodextrins.
J. Incl. Phenom. Macro., **53**, 155-161 (2005).
- 70. Treszczanowicz T., Kasprzycka-Guttman T., Treszczanowicz A.J.**
Solubility of β -carotene in binary solvents formed by some hydrocarbons with tert-butyl methyl ether and with tert-amyl methyl ether.
J. Chem. Eng. Data, **50**, 973-976 (2005).
- 71. Udachin K.A., Lipkowski J.**
Water-fluorine chains in (18-crown-6) \cdot NH₄F \cdot 3H₂O hydrate.
J. Struct. Chem., **46**, 84-87 (2005).
- 72. Uncuta C., Caraman G.B., Tanase C.I., Bartha E., Kravtsov V.Ch., Simonov Yu.A., Lipkowski J., Vanthuynne N., Roussel C.**
Synthesis and absolute configuration assignment of 5-amino-1,3,5-triphenyl-pentane-1,3-diol stereoisomers.
Chirality, **17**, 63-72 (2005).
- 73. Zięborak-Tomaszkiewicz I.**
Some thermodynamic aspects of nitrides in Mater. Sci. that were studied by fluorine bomb calorimetry.
Proceedings of 'ECCTAE' 2005 - European Conference on Calorimetry and Thermal Analysis for Environment, (ed. I. Zięborak-Tomaszkiewicz)
Institute of Physical Chemistry PAS, Warsaw, Poland, 41-46 (2005).
- 74. Zięborak-Tomaszkiewicz I., Gierycz P.**
Thermochemical calculations.
in: 'Thermodynamics for Environment', eds. P.Gierycz, I.Zięborak-Tomaszkiewicz,
Institute of Physical Chemistry PAS Warsaw, Poland, 95-112 (2005).

- 75. Zielenkiewicz A.**
Comparison of enthalpy and apparent molar volume data of salting lysozyme solutions at various NaCl concentrations.
Thermochim. Acta, **436**, 68-70 (2005).
- 76. Zielenkiewicz A., Zielenkiewicz W.**
Calorimetric and volumetric investigations of nucleating bovine albumin solutions at various NaCl, Li₂SO₄ and (NH₄)₂SO₄ concentration.
J. Thermal. Anal. Cal., **80**, 407-411 (2005).
- 77. Zielenkiewicz A., Zielenkiewicz W.**
Comparison of enthalpy and apparent molar volume data on nucleating lysozyme solution at various Li₂SO₄, MgCl₂ and (NH₄)₂SO₄ concentrations.
J. Mol. Liq., **121**, 3-7 (2005).
- 78. Zielenkiewicz W.**
Scope of calorimetry in the area of macrocyclic chemistry.
in: "Thermodynamics for Environment", eds. P.Gierycz, I.Zięborak-Tomaszkiewicz,
Institute of Physical Chemistry PAS Warsaw, Poland, 147-162 (2005).
- 79. Zielenkiewicz W., Marcinowicz A., Poznański J., Cherenok S., Kalchenko V.**
Complexation of isoleucine by phosphorylated calix[4]arene in methanol using calorimetry, NMR, UV-VIS spectroscopy and molecular modelling methods.
J. Mol. Liq., **121**, 8-14 (2005).
- 80. Zielenkiewicz W., Perlovich G.L.**
Volumetric properties of tetraphenylporphyrin and some of its alkoxy and tert-butyl derivatives in tetrachloromethane solutions.
J. Mol. Liq., **121**, 27-34 (2005).
- 81. Zielenkiewicz W., Szterner P.**
Thermodynamic investigation of uracil and its halo-derivatives. Enthalpies of solution and solvation in methanol.
J. Chem. Eng. Data, **50**, 1139-1143 (2005).

- 82. Zielenkiewicz W., Szterner P.**
Thermodynamic properties of uracil and its halogen, amino and nitro derivatives.
Proceedings of 'ECCTAE'2005 - European Conference on Calorimetry and Thermal Analysis for Environment, (ed. I. Zięborak-Tomaszkiewicz)
Institute of Physical Chemistry PAS, Warsaw, Poland, 53-58 (2005).

MONOGRAPHS AND PAPERS IN SCIENTIFIC JOURNALS IN PRESS

- 1. Asztemborska M., Bielejewska A.**
Chromatography,
in: "Handbook of Cyclodextrins: Chemistry, Spectroscopy and Applications" (ed. H. Dodziuk)
- 2. Asztemborska M., Żukowski J.**
Determination of diastereomerization barrier of some flavanones by HPLC methods.
Journal of Chromatography A.,
- 3. Attanasio F., Świerzewski R., Rialdi G., Zielenkiewicz W.**
Pressure perturbation calorimetry of poly(ethylene) glycol solutions in water.
J. Therm. Anal. Calorim.,
- 4. Baitalow F., Wolf G., Grolier J.-P.E., Dan D., Randzio S.L.**
Thermal decomposition of ammonia-borane under pressures up to 600 bar.
Thermochim. Acta,
- 5. Boyer S.A.E., Randzio S.L., Grolier J.-P.E.**
Thermal expansion of polymers submitted to supercritical CO₂ as a function of pressure.
J. Polym. Sci.,
- 6. Corvaro F., Di Nicola G., Pacetti M., Stryjek R.**
Isochoric PVT_x measurements for the C₂H₆ + N₂O binary system.
J. Chem. Eng. Data,

- 7. Defossement G., Randzio S.L., Legendre B.**
Identification of an enantiotropic system with hindered multiphase transitions. Reexamination of polymorphism in carbamazepine.
J. Therm. Anal. Calorim.,
- 8. Gierycz P.**
Calculation of petroleum processes using the modified distillation package.
Polish J. Chem.,
- 9. Gregorowicz J.**
Phase behaviour in the vicinity of the three-phase solid – liquid – vapour line in asymmetric nonpolar systems at high pressures.
Fluid Phase Equilibria,
- 10. Groszek G., Błażej S., Brud A., Świerczyński D., Lemek T.**
Reactions of carbanions derived from α -substituted-methyl tolyl sulfones with quinone methides as Michael acceptors.
Tetrahedron,
- 11. Koźbial M., Poznański J., Utzig E., Lipkowski J.**
Complex formation of d-mannonafto-crown-6 and enantiomers of phenylalanine in water studied by different physicochemical methods.
J. Therm. Anal. Calorim.,
- 12. Kurkov S.V., Perlovich G.L., Zielenkiewicz W.**
Thermodynamic investigations of sublimation, solubility and solvation of [4-(benzyloxy)-phenyl]acetic acid.
J. Therm. Anal. Calorim.,
- 13. Poznański J.**
2D-NMR 3D mapping of lysozyme salting phenomena.
J. Therm. Anal. Calorim.,
- 14. Poznański J., Utzig E.**
Calorimetric titration experiment modelled by equilibrium of 2:1 and 1:1 complexes.
J. Therm. Anal. Calorim.,

- 15. Wszelaka-Rylik M., Zielenkiewicz W.**
Enthalpy changes of salting processes of hen-egg white lysozyme in various electrolyte solutions.
J. Therm. Anal. Calorim.,
- 16. Zielenkiewicz W., Marcinowicz A., Poznański J., Cherenok S., Kalchenko V.**
Calorimetric, NMR, and UV investigations of aliphatic L-amino acids complexation by calix[4]arene bis-hydroxymethylphosphous acid.
J. Incl. Phenom.,
- 17. Zielenkiewicz W., Marcinowicz A., Cherenok S., Kalchenko V., Poznański J.**
Phosphorylated calixarenes as receptors of L-aminoacids and dipeptides: calorimetric determination of Gibbs energy, enthalpy and entropy of complexation.
Supramol. Chem.,
- 18. Zielenkiewicz W., Świerzewski R., Attanasio F., Rialdi G.**
The thermochemical, volumetric and spectroscopic properties of lysozyme – poly(ethylene) glycol system.
J. Therm. Anal. Calorim.,
- 19. Zielenkiewicz A., Zielenkiewicz W.**
Calorimetric and volumetric data of nucleating bovine albumin and albumin from human serum at various NaCl concentration.
J. Therm. Anal. Calorim.,
- 20. Zięborak-Tomaszkiewicz I.**
Thermochemical study of indium nitride.
Polish J. Chem.,
- 21. Zięborak-Tomaszkiewicz I.**
Some thermodynamic aspects of nitrides in Mater. Sci. that were studied by fluorine bomb calorimetry.
J. Therm. Anal. Calorim.,

**LECTURES AND COMMUNICATIONS PRESENTED
AT SCIENTIFIC CONFERENCES**

1. **Asztemborska M., Kaczmarek K., Zbaraża E., Kowalska T., Głód B.K.**
Vacant Reversed Phase High Performance Liquid Chromatography (vRP-HPLC).
The XXIXth Symposium “Chromatographic Methods of Investigating the Organic Compounds”, Katowice-Szczyrk, Poland, 2005.
2. **Asztemborska M., Skórka M.**
Thermodynamic studies of complexation and enantioselective recognition processes of monoterpenoids by α - and β -cyclodextrin in gas chromatography.
Xth International Seminar on Inclusion Compounds, Kazan, Russia 2005.
3. **Baitalov F., Wolf G., Dan F., Grolier J.-P.E., Randzio S.L.**
Monitoring of decomposition processes under high pressure conditions by means of calorimetry and volumetric detection.
Ulm-Freiberger Kalorimetrie Tage, Freiberg, Germany, 2005.
4. **Bielejewska A.**
Liquid chromatography and capillary electrophoresis as a tools for the characterisation of molecular recognition processes.
Moldavian-Polish-Ukrainian Symposium on Supramolecular Chemistry, Chisinau, R. Moldova, 2005.
5. **Bielejewska A., Baran P., Kamińska-Duda A.**
Influence of various amines added to the mobile phase on chiral discrimination obtained on Chiralpak AD column-thermodynamic study.
Xth International Seminar on Inclusion Compounds, Kazan, Russia 2005.
6. **Bobbo S., Scattolini M., Camporese R., Fedele L., Stryjek R.**
Solubility of carbon dioxide in pentaerythritol esters.
IIR Intern. Conf. Thermophysical Properties and Transfer Processes of Refrigerants, Vicenza, Italy, 2005.

7. **Boyko V., Rodik R., Kalchenko V., Tsymbal L., Lampeka Y., Danylyuk O., Suwińska K., Lipkowski J.**
Tetrazolecalix[4]arenes as new ligands for palladium(II).
Moldavian–Polish–Ukrainian Symposium on Supramolecular Chemistry, Chisinau, R. Moldova, 2005.

8. **Boyko V., Yakovenko A., Kalchenko O., Kalchenko V., Danylyuk O., Suwińska K., Lipkowski J.**
Inherently chiral camphorsulfonylcalixarene.
Xth International Seminar on Inclusion Compounds, Kazan, Russia, 2005.
Moldavian–Polish–Ukrainian Symposium on Supramolecular Chemistry, Chisinau, R. Moldova, 2005.

9. **Cecillon S., Coleman A.W., Danylyuk O., Suwińska K.**
Differential interactions between mono-, 1,2 disubstituted and 1,3 disubstituted–calix[4]arenes and guest molecules.
Moldavian–Polish–Ukrainian Symposium on Supramolecular Chemistry, Chisinau, R. Moldova, 2005.

10. **Cherenok S., Boyko V., Yakovenko A., Kalchenko V., Danylyuk O., Suwińska K., Lipkowski J.**
Calixarene receptors for chiral recognition.
Xth International Seminar on Inclusion Compounds, Kazan, Russia 2005.

11. **Di Nicola G., Giuliani G., Polonara F., Stryjek R.**
Blends of CO₂ and N₂O as working fluids in cascade cycles.
IIR Intern. Conf. Commercial Refrigeration, Vicenza, Italy, 2005.

12. **Di Nicola G., Giuliani G., Polonara F., Stryjek R.**
Isochoric measurements for the nitrous oxide + ethane binary system.
21st European Symposium on Applied Thermodynamics, Jurata, Poland, 2005.

13. **Di Nicola G., Giuliani G., Polonara F., Stryjek R.**
PVT_x and VLE properties of refrigerant mixtures from isochoric and Burnett experiments.
IIR Intern. Conf. Thermophysical Properties and Transfer Processes of Refrigerants, Vicenza, Italy, 2005.

- 14. Domańska-Żelazna U., Marciniak M., Malanowski S.K.**
Thermodynamic properties of the congruently melting compounds for systems (alkan-1-ol + amine).
3rd Thermodynamics Polish-French Days, Carry le Rouet, France, 2005.
- 15. Gelmboldt V.O., Ganin Ed.V., Fonari M.S., Simonov Yu.A., Bocelli G., Lipkowski J.**
Host-Guest compounds of germanium(IV) fluorocomplexes with macrocyclic ligands.
Moldavian-Polish-Ukrainian Symposium on Supramolecular Chemistry, Chisinau, R. Moldova, 2005.
- 16. Gerbeleu N.Y., Simonov Yu.A., Bologa O.A., Bourosh P.N., Lipkowski J., Gdanec M.**
Slabye mezmolekulyarnye zaimodejstviya Au...Au i Au...Cl v dioksimatah zolota im ih rol v formirovanii struktury.
Moldavian-Polish-Ukrainian Symposium on Supramolecular Chemistry, Chisinau, R. Moldova, 2005.
- 17. Gierycz P.**
Common calculation of phase equilibria and excess thermodynamic functions.
3rd Thermodynamic Polish-French Days, Carry le Rouet, France, 2005.
- 18. Gierycz P.**
Prediction of excess enthalpy data of binary systems containing alcohols and hydrocarbons from VLE data using the NRTLmKW model.
MEDICTA'2005 (7th Mediterranean Conference on Calorimetry and Thermal Analysis), Greece, Thessaloniki, 2005 (*key lecture*).
- 19. Gierycz P.**
Calculation of petroleum processes using the modified distillation package elaborated in the Institute of Physical Chemistry PAS.
21st European Symposium on Applied Thermodynamics, Jurata, Poland, 2005.

- 20. Gierycz P.**
Metody opisu równowag ciecz-para układów wieloskładnikowych.
Microsymposium of the Polish Supramolecular Chemistry Network,
Radom, Poland, 2005.
- 21. Gierycz P.**
Prediction of excess Gibbs energy from excess enthalpy data for
binary mixtures containing alcohols and hydrocarbon.
ECCTAE'2005 (European Conference on Calorimetry and Thermal
Analysis for Environment), Zakopane, Poland, 2005.
- 22. Gierycz P.**
Prediction of thermodynamic properties from excess enthalpy data.
The Summer School of Thermodynamics, Zakopane, Poland, 2005.
- 23. Gierycz P.**
Thermodynamics for environment.
The Polish-Norwegian Forum of Competence, Warsaw, Poland, 2005.
- 24. Grolier J.-P.E., Boyer S.A.E., Randzio S.L.**
Thermophysical properties of polymers submitted to high T and P to
sorption of supercritical fluids.
21st European Symposium on Applied Thermodynamics, Jurata,
Poland, 2005 (*invited lecture*).
- 25. Justyniak I., Lipkowski J., Lewiński J., Bury W.**
Molecular and supramolecular structure of alkylzinc carboxylates.
Xth International Seminar on Inclusion Compounds, Kazan, Russia,
2005.
- 26. Kędra-Królik K., Gierycz P.**
Modelling of gas – liquid – solid reaction in the new rotating disc
precipitation reactor.
3rd Thermodynamic Polish-French Days, Carry le Rouet, France,
2005.
ECCTAE, Zakopane, Poland, 2005.

- 27. Kędra-Królik K., Gierycz P.**
Monodispersed nanocrystals of calcite. Experimental data and calculation.
3rd Thermodynamics Polish-French Days, Carry le Rouet, France, 2005.
- 28. Kędra-Królik K., Gierycz P.**
Obtaining calcium carbonate in a multiphase system by the use of new rotating disc precipitation reactor.
21st ESAT, Jurata, Poland, 2005
- 29. Kędra-Królik K., Gierycz P.**
Precipitation of monodispersed crystals of calcium carbonate in a multiphase system by the use of new rotating disc reactor.
MEDICTA'2005 (7th Mediterranean Conference on Calorimetry and Thermal Analysis), Greece, Thessaloniki, 2005.
- 30. Klimek K., Kutner W., Czerwiński A., Elżanowska H., Gorton L.**
Some electrochemical properties of laccase immobilised on the Au, IrO_x, or C₆₀-Pd polymer electrode supports.
2nd International Workshop on Surface Modification for Chemical and Biochemical Sensing SMCBS'2005, Kazimierz Dolny, Poland, 2005.
- 31. Kochman A., Farace G., Vadgama P., Haupt K., Kutner W.**
Electrochemical quartz crystal microbalance study of some protein adsorption.
ERMIS 8, Electrode Reaction Mechanism and Interfacial Structure, Freudenstadt-Lauterbad, Germany, 2005.
- 32. Kochman A., Kutner W., Farace G., Vadgama P.**
Towards preventing albumin to adsorb on a solid substrate surface.
Bioelectrochemistry 2005. XVIII International Symposium on Bioelectrochemistry and Bioenergetics of the Bioelectrochemical Society (BES), 3rd Spring Meeting of the International Society of Electrochemistry (ISE), Coimbra, Portugal, 2005.
- 33. Kochman A., Kutner W., Farace G., Vadgama P.**
Electrochemical quartz crystal microbalance study of avidin and albumin adsorption under flow injection analysis conditions.
2nd International Workshop on Surface Modification for Chemical and Biochemical Sensing SMCBS'2005, Kazimierz Dolny, Poland, 2005.

- 34. Kołodziejczyk E., Lipkowski J., Lewiński J., Tratkiewicz E., Horeglad P.**
Molecular and crystal structures of sterically crowded aryloxide compounds of aluminium.
Xth International Seminar on Inclusion Compounds, Kazan, Russia 2005.
- 35. Komarov V.Yu., Rodionova T.V., Terekhova I.S., Aladko L.S., Suwińska K., Lipkowski J.**
The structural features of host frameworks of peralkylammonium salts semiclathrate hydrates.
Xth International Seminar on Inclusion Compounds, Kazan, Russia, 2005.
- 36. Koźbial M., Lipkowski J., Poznański J., Utzig E.**
Conduction and titration microcalorimetry and H₁ NMR studies on the complexing ability of D-mannonafto-crown-6-ether and enantiomeric amino acids.
European Conference on Calorimetry and Thermal Analysis for Environment (ECCTAE 2005), Zakopane, Poland, 2005.
- 37. Kurkov S.V., Perlovich G.L., Zielenkiewicz W.**
Thermodynamics sublimation and solvation of 4-benzyloxyphenylacetic acid.
European Conference on Calorimetry and Thermal Analysis for Environment (ECCTAE 2005), Zakopane, Poland, 2005.
- 38. Kutner W., Pięta P., Nowakowski R.¹, Sobczak J.W.², Kaszkur Z.³, McCarty A.L., D'Souza F.**
Composition, structure, surface topography, and electrochemical properties of electrophoretically deposited fullerene films.
2nd International Workshop on Surface Modification for Chemical and Biochemical Sensing SMCBS'2005, Kazimierz Dolny, Poland, 2005.

¹ Department IV

² Department VI

³ Department V

- 39. Kutner W., Pięta P., Nowakowski R.¹, Sobczak J.W.², Kaszkur Z.³, McCarty A.L., D'Souza F.**
Composition, structure, surface properties, topography, and electrochemical properties of electrophoretically deposited nanostructured fullerene films.
56th Annual Meeting of the International Society of Electrochemistry "Electrochemistry for the Next Generation", Busan, Korea, 2005.
- 40. Kwaterczak A., Bielejewska A., Kalchenko V.I.**
Complex formation analysis of phosphorylated calixarene by capillary zone electrophoresis.
XXX International Symposium on Macrocyclic Chemistry, Dresden, Germany, 2005.
- 41. Lazar A.N., Coleman A.W., Baggetto L.G., Michaud M.H., Suwińska K., Danylyuk O., Navaza A., Dupont N.**
Complexation and biology of calix[4]arenes diphosphonates.
Moldavian–Polish–Ukrainian Symposium on Supramolecular Chemistry, Chisinau, R. Moldova, 2005.
- 42. Liao C.Y., Tseng K.H., Tien D.C., Stobiński L., Tsung T.T., Kao W.S.**
Characterization of gold nanoparticles fabricated by arc discharge in liquid.
2005 International Symposium on NanoScience and Technology, Tainan, Taiwan, ROC, 2005.
- 43. Lipkowski J.**
Hydrophobic hydration-ecological aspects.
ECCTAE 2005, European Conference on Calorimetry and Thermal Analysis for Environment, Zakopane, Poland, 2005.
Moldavian-Polish-Ukrainian Symposium on Supramolecular Chemistry, Chisinau, R. Moldova, 2005.

¹ Department IV

² Department VI

³ Department V

- 44. Luboradzki R., Pakulski Z.**
Glucofuranose derivatives – one of the smallest and highly efficient gelators.
Xth International Seminar on Inclusion Compounds, Kazan, Russia, 2005.
- 45. Luboradzki R., Starkowski S.**
Reichardt's dye as an optical probe for gelation process studies.
Moldavian-Polish-Ukrainian Symposium on Supramolecular Chemistry, Kiszyniów, R. Moldova, 2005.
- 46. Marczak R., Noworyta K., Nowakowski R.¹, Gadde S., Zandler M., Desbat B., Kutner W., D'Souza F.**
Formation and properties of donor-acceptor dyads of Zn porphyrins and amine adducts of C₆₀ in the Langmuir and Langmuir-Blodgett films.
ERMIS 8, Electrode Reaction Mechanism and Interfacial Structure, Freudenstadt-Lauterbad, Germany, 2005.
- 47. Marczak R., Noworyta K., Nowakowski R.², Kutner W., Desbat B., Araki Y., Ito O., Gadde S., Zandler M.E., D'Souza F.**
Formation and properties of donor-acceptor dyads of Zn porphyrins and C₆₀-imidazole adduct in the Langmuir and Langmuir-Blodgett films.
2nd International Workshop on Surface Modification for Chemical and Biochemical Sensing SMCBS'2005, Kazimierz Dolny, Poland, 2005.
- 48. Matyszek M., Gierycz P., Domańska-Żelazna U., Modaressi A., Rogalski M.**
Host-guest complexes of β-cyclodextrin in non-aqueous environment.
ECCTAE'2005 (European Conference on Calorimetry and Thermal Analysis for Environment), Poland, Zakopane 2005.
- 49. McCarty A.L., Pięta P., Kutner W., D'Souza F.**
Preparation, surface characteristics and electrochemical properties of electrophoretically deposited C₆₀ films.
The 19th International Winterschool (Euroconference) on Electronic Properties of Novel Materials. Molecular Nanostructures, Kirchberg in Tirol, Austria, 2005.

¹ Department IV

² Department IV

- 50. Miroshnichenko S.I., Klimchuk O.V., Atamas L.I., Smirnov I.V., Babain V.A., Świerczyński D., Lipkowski J., Kalchenko V.I.**
Calix[4]arene phosphine oxides for actinides and lanthanides extraction.
Moldavian-Polish-Ukrainian Symposium on Supramolecular Chemistry, Chişinău, Moldova, 2005.
- 51. Miśkiewicz M., Bielejewska A., Kulig K., Malawska B., Żukowski J.**
Influence of mobile phase composition on ananthiomerism discrimination obtained on the cyclobond i beta dmp column in the hplc system.
XXX International Symposium on Macrocyclic Chemistry, Dresden, Germany, 2005.
- 52. Perret F., Danylyuk O., Suwińska K., Coleman A.W.**
Anionic calix[8]arenes chemistry.
Moldavian–Polish–Ukrainian Symposium on Supramolecular Chemistry, Chisinau, R. Moldova, 2005.
- 53. Poznański J.**
Modelowanie molekularne jako środek opisu procesu tworzenia słabych kompleksów.
Sesja Sprawozdawcza Użytkowników Warszawskiego Centrum KDM (Komputerów Dużej Mocy), Goniądz, Poland, 2005.
- 54. Poznański J.**
The role of aqueous solvent in stabilization/destabilization inter- and intramolecular interactions.
Thermodynamics for Environment. Third Summer School of Thermodynamics, Zakopane, Poland, 2005.
- 55. Poznański J., Utzig E.**
Calorimetric titration experiment modelled by equilibrium of 2:1 and 1:1 complexes.
European Conference on Calorimetry and Thermal Analysis for Environment(ECCTAE 2005), Zakopane, Poland, 2005.

- 56. Poznański J., Zielenkiewicz W.**
2d-NMR 3d-mapping of lysozyme salting phenomena
European Conference on Calorimetry and Thermal Analysis for
Environment(ECCTAE 2005), Zakopane, Poland, 2005.
- 57. Radul O.M., Malinowski S.T., Luboradzki R., Makaiev S.Z.**
Kristaliczeskaia struktura supramolekularnoi systemy 1-(2-
oksopropil)-3-etylienketala indolidiona-2,3 i jego tiosemikarbazona.
Moldavian-Polish-Ukrainian Symposium on Supramolecular
Chemistry, Kiszyniów, R. Moldova, 2005.
- 58. Randzio S.L.**
Transitiometry of starch.
European Conference on Calorimetry and Thermal Analysis for
Environment(ECCTAE 2005), Zakopane, Poland, 2005 (*plenary
lecture*).
- 59. Religa P., Gierycz P.**
Liquid membranes – new perspective methods limited loss of
chromium tan in the tanning process.
International Conference „Light Industry – Fibrous Materials”,
Radom, Poland, 2005.
- 60. Rodik R., Boiko V., Tsymbal I., Kalchenko V., Danylyuk O.,
Suwińska K., Lipkowski J., Slinchenko N., Babich L., Shlykov S.,
Kosterin S.**
Calix[4]arenesulfonylamidines. Synthesis, structure and influence on
 Mg^{2+} , ATP- dependent calcium pumps.
Moldavian–Polish–Ukrainian Symposium on Supramolecular
Chemistry, Chisinau, R. Moldova, 2005.
- 61. Rodik R., Boyko V., Kalchenko V., Danylyuk O., Suwińska K.,
Lipkowski J.**
Synthesis, structure and properties of calix[4]arenes functionalized
with pharmacophoric groups.
Moldavian–Polish–Ukrainian Symposium on Supramolecular
Chemistry, Chisinau, R. Moldova, 2005.

- 62. Rogalski M., Gierycz P., Solimando R., Malanowski S.K.**
Thermodynamics of chlorophenol aqueous solutions.
21st European Symposium on Applied Thermodynamics, Jurata,
Poland, 2005.
- 63. Rogalski M., Słowik K., Safar M., Bernardi D., Dicko A.,
Gierycz P.**
Dispersing properties of ionic liquids towards petroleum asphaltenes.
21st European Symposium on Applied Thermodynamics, Poland,
Jurata, 2005.
- 64. Schumacher A.L., Pięta P., Kutner W., D'Souza F.**
Preparation and selected properties of electrophoretic [C₆₀]fullerene
films.
ERMIS 8, Electrode Reaction Mechanism and Interfacial Structure,
Freudenstadt-Lauterbad, Germany, 2005.
- 65. Skórka M., Asztemborska M., Lipkowski J.**
Micelle of bile salts as new stationary phases in gas-liquid
chromatography.
Xth International Seminar on Inclusion Compounds, Kazan, Russia
2005.
- 66. Soldatov D.V., Moudrakovski I.L., Ripmeester, Enright G.D.,
Ratcliffe C.I., Manakov A.Yu., Ogienko A.G., Suwińska K.,
Lipkowski J.**
Prospects for biocompatible, peptide-based host materials.
Moldavian–Polish–Ukrainian Symposium on Supramolecular
Chemistry, Chisinau, R. Moldova, 2005.
- 67. Stobiński L., Chang Y.C., Lin H.M.**
Hopping growth mechanism of single walled carbon nanotubes
synthesized by the CVD technique.
5th IEEE Conference on Nanotechnology, Nagoya, Japan, 2005.
- 68. Stobiński L., Peszke J., Lin H.M., Lin C.K.**
Optical properties of the narrowest single - walled carbon nanotubes
based on C₂₀ fullerene.
The First International Conference on One- Dimensional
Nanomaterials, Taipei, Taiwan, 2005.

- 69. Stobiński L., Peszke J., Lin H.M., Lin C.K.**
Simulation of the Raman and IR spectra of the smallest carbon nanotubes.
3rd International Conference on Material for Advanced Technologies, Singapore, 2005.
- 70. Suwińska K.**
Calix-type compounds as hosts for different guest molecules.
COST D31 MC and Workshop, Leuven, Belgium, 2005.
- 71. Suwińska K.**
Calix-type compounds with large cavities.
8th International Conference on Calixarenes, Prague, Czech Republic, 2005.
- 72. Suwińska K.**
6- and 8-membered calix-type compounds and their complexes.
Moldavian–Polish–Ukrainian Symposium on Supramolecular Chemistry, Chisinau, R. Moldova, 2005 (*invited lecture*).
- 73. Suwińska K.**
Calix-type compounds with large cavities.
47th Crystallographic Seminar, Wrocław, Poland, 2005.
- 74. Suwińska K.**
Conformations of large calix-type compounds and their complexes.
Xth International Seminar on Inclusion Compounds, Kazan, Russia, 2005 (*invited lecture*).
- 75. Świerczyński D., Kalchenko V.I., Lipkowski J.**
Resorcinarene –pyrazine complexes of different structure.
Moldavian-Polish-Ukrainian Symposium on Supramolecular Chemistry, Chişinău, Moldova, 2005.
- 76. Świerczyński D., Kalchenko V.I., Lipkowski J.**
C-ethyl-resorcinarene as a receptor for monocyclic, nonaromatic guests containing nitrogen. X-ray study of inclusion complex.
8th International Conference on Calixarenes(CALIX2005), Prague, Czech Republic, 2005.

77. **Świerczyński D., Kalchenko V.I., Lipkowski J.**
Crystal structure of inclusion complex of acetyl derivative of calix[4]arene with dichloromethane.
8th International Conference on Calixarenes(CALIX2005), Prague, Czech Republic, 2005.
78. **Świerczyński D., Kalchenko V.I., Lipkowski J.**
Guest complexation by ethylresorcinarenes – crystal structure of C-ethyl-resorcinarene•Acetone•Pyrazine trihydrate.
Xth International Seminar on Inclusion Compounds (ISIC-10), Kazan, Russia, 2005.
79. **Świerczyński D., Kalchenko V.I., Lipkowski J.**
Resorcinarene complexes with quinoline of different stoichiometry.
Xth International Seminar on Inclusion Compounds (ISIC-10), Kazan, Russia, 2005.
80. **Świerzewski R., Szterner P., Koźbial M., Zielenkiewicz W.**
Heat capacities determination of uracil and its substituted derivatives.
European Conference on Calorimetry and Thermal Analysis for Environment, (ECCTAE 2005), Zakopane, Poland, 2005.
81. **Świerzewski R., Zielenkiewicz W.**
The thermodynamics of lysozyme-PEG system. Macromolecular crowding aspect.
European Conference on Calorimetry and Thermal Analysis for Environment (ECCTAE 2005), Zakopane, Poland, 2005.
82. **Szterner P., Zielenkiewicz W.**
Thermodynamic investigation of uracil and its halogenated derivatives.
21st European Symposium on Applied Thermodynamics (ESAC 2005), Jurata, Poland, 2005.
83. **Terekhova I.V., Marcinowicz A., Zielenkiewicz W.**
Calorimetric study on interactions of cyclodextrins with some B-family vitamins.
European Conference on Calorimetry and Thermal Analysis for Environment (ECCTAE 2005), Zakopane, Poland, 2005.

- 84. Tien D.C., Huang J.C., Lung J.K., Liao C.Y., Tseng K.H., Tsung T.T., Kao W.S., Tsai T.H., Jwo C.S., Lin H.M., Stobiński L.**
Preparation of Gold Nanoparticles by Arc-Discharge in Water
12th International Symposium on Metastable and Nano Materials (ISMANAM) Paris, France, 2005.
- 85. Wawrzyniak M.**
Framework programmes of the European Union.
3rd Thermodynamics Polish-French Days, Carry le Rouet, France, 2005.
- 86. Wawrzyniak M.**
Research in the European Union. Sources of financing.
3rd Summer School of Thermodynamics, Zakopane, Poland, 2005.
- 87. Winkler K., Kutner W., Balch A.L.**
Electrochemically formed fullerene-based polymers.
2nd International Workshop on Surface Modification for Chemical and Biochemical Sensing SMCBS'2005, Kazimierz Dolny, Poland, 2005.
- 88. Zięba K., Taraszewska J., Korybut-Daszkiewicz B., Kowalski J.**
Dinuclear biscyclidene Ni(II) and Cu(II) complexes bridged by two di-aza-18-crown-6 ethers: characteristics and interaction with guests.
Frühjahrssymposium 2005, 7th Young Scientists Conference On Chemistry, Berlin, Germany, 2005.
- 89. Zięba K., Taraszewska J., Korybut-Daszkiewicz B., Kowalski J., Pawłowska S.**
Electrochemical characteristics and interaction with anions of homo- and hetero-dinuclear biscyclidene Ni(II) and Cu(II) complexes bridged by two di-aza-18-crown-6 ethers.
2nd International Workshop, "Surface Modification for Chemical and Biochemical Sensing", Kazimierz Dolny, Poland, 2005.
- 90. Zięborak-Tomaszkiewicz I.**
Indium nitride: calorimetric studies and analytical chemistry.
Mediterranean Conference on Calorimetry and Thermal Analysis (MEDICTA 2005), Thessaloniki, Greece, 2005.

- 91. Zięborak-Tomaszkiewicz I.**
Thermochemical study of indium nitride.
21st European Symposium on Applied Thermodynamics (ESAC 2005), Jurata, Poland, 2005.
- 92. Zięborak-Tomaszkiewicz I.**
Some thermodynamic aspects of nitrides in Mater. Sci. that were studied by fluorine bomb calorimetry.
European Conference on Calorimetry and Thermal Analysis for Environment (ECCTAE 2005), Zakopane, Poland, 2005.
- 93. Zięborak-Tomaszkiewicz I., Gierycz P.**
Prediction of SLE from VLE data by the use of NRTLmKW model.
3rd Thermodynamics Polish-French Days, Carry Le Rouet, France, 2005.
- 94. Zięborak-Tomaszkiewicz I., Gierycz P.**
Thermochemical calculations.
Thermodynamics for Environment. Third Summer School of Thermodynamics, Zakopane, Poland, 2005 (*invited lecture*).
- 95. Zielenkiewicz A.**
The conformational changes of 5SrRNA from lupin seeds and tRNA^{phe} in presence of Ca²⁺, Pb²⁺ and Cu²⁺ cations by differential scanning calorimetry.
European Conference on Calorimetry and Thermal Analysis for Environment (ECCTAE 2005), Zakopane, Poland, 2005.
- 96. Zielenkiewicz A.**
Complexation of hen eggs lysozyme by various salts. Comparison of enthalpy and apparent molar volume data.
Moldavian - Polish - Ukrainian Symposium on Supramolecular Chemistry, Chişinău, R. Moldova, 2005.
- 97. Zielenkiewicz A., Zielenkiewicz W.**
Calorimetric and volumetric data of nucleating bovine albumin and albumin from human serum at various NaCl concentration.
29th International Conference on Solution Chemistry, Portoroz, Slovenia, 2005.

- 98. Zielenkiewicz A., Zielenkiewicz W.**
Comparison of enthalpy and apparent molar volume data of nucleating lysozyme solutions at various NaCl concentrations.
Mediterranean Conference on Calorimetry and Thermal Analysis (MEDICTA 2005), Thessaloniki, Greece, 2005.
- 99. Zielenkiewicz W.**
Calorimetric and volumetric investigations for small proteins salting.
(ECCTAE 2005) European Conference on Calorimetry and Thermal Analysis for Environment, Zakopane, Poland, 2005.
- 100. Zielenkiewicz W.**
Complexation of small proteins by mono- and divalent ions.
Moldavian - Polish - Ukrainian Symposium on Supramolecular Chemistry, Chişinău, R. Moldova, 2005.
- 101. Zielenkiewicz W.**
Scope of calorimetry in the area of macrocyclic chemistry.
Thermodynamics for Environment. Third Summer School of Thermodynamics, Zakopane, Poland, 2005 (*invited lecture*).
- 102. Zielenkiewicz W.**
Classification of calorimeters.
Mediterranean Conference on Calorimetry and Thermal Analysis (MEDICTA 2005), Thessaloniki, Greece, 2005.
- 103. Zielenkiewicz W., Marcinowicz A., Cherenok S., Kalchenko V., Poźnański J.**
Phosphorylated calyx[4]arenes as receptors for amino acids.
Calorimetric and spectroscopic experiments.
European Conference on Calorimetry and Thermal Analysis for Environment (ECCTAE 2005), Zakopane, Poland, 2005.
- 104. Zielenkiewicz W., Marcinowicz A., Cherenok S., Kalchenko V., Poźnański J.**
Phosphorylated calix[4]arenes as receptors for amino acids.
Calorimetric and spectroscopic experiments.
29th International Conference on Solution Chemistry (ICSC), Portoroz, Slovenia, 2005.

- 105. Zielenkiewicz W., Marcinowicz A., Kalchenko O., Cherenok S., Solovyov A., Kalchenko V., Poznański J.**
Complexation of the upper rim phosphorylated calyx[4]arenes with uracil derivatives in water containing solution.
European Conference on Calorimetry and Thermal Analysis for Environment (ECCTAE 2005), Zakopane, Poland, 2005.
- 106. Zielenkiewicz W., Marcinowicz A., Kalchenko O., Cherenok S., Solovyov A., Kalchenko V., Poznański J.**
Phosphorylated calixarenes as receptors of biologically active compounds. I. Application for uracil derivatives.
Moldavian - Polish - Ukrainian Symposium on Supramolecular Chemistry, Chişinău, R. Moldova, 2005.
- 107. Zielenkiewicz W., Marcinowicz A., Kalchenko O., Cherenok S., Solovyov A., Kalchenko V., Poznański J.**
Phosphorylated calixarenes as receptors of biologically active compounds. II. Application for uracil derivatives.
Moldavian - Polish - Ukrainian Symposium on Supramolecular Chemistry, Chişinău, R. Moldova, 2005.
- 108. Zielenkiewicz W., Marcinowicz A., Kalchenko O., Cherenok S., Solovyov A., Poznański J.**
Complexation of the upper rim phosphorylated calix[4]arenes with uracil derivatives in water containing solution.
29th International Conference on Solution Chemistry, Portoroz, Slovenia, 2005.
- 109. Zielenkiewicz W., Marcinowicz A., Kalchenko O., Cherenok S., Solovyov A., Kalchenko V., Poznański J.**
Phosphorylated calixarenes as receptors of biologically active compounds.
Moldavian - Polish - Ukrainian Symposium on Supramolecular Chemistry, Chişinău, R. Moldova, 2005.
- 110. Zielenkiewicz W., Szterner P.**
Thermodynamic properties of uracil and its halogen, amino and nitro derivatives.
European Conference on Calorimetry and Thermal Analysis for Environment (ECCTAE 2005), Zakopane, Poland, 2005.

111. Zielenkiewicz W., Wszelaka-Rylik M.

Thermochemical investigations of salting processes of hen-egg white proteins in various electrolyte solutions.

European Conference on Calorimetry and Thermal Analysis for Environment (ECCTAE 2005), Zakopane, Poland, 2005.

112. Zielenkiewicz W., Wszelaka-Rylik M., Poznański J., Zielenkiewicz A.

Thermochemical investigations of salting processes of hen-egg white lysozyme in various electrolyte solutions.

29th International Conference on Solution Chemistry (ICSC), Portoroz, Slovenia, 2005.

**INVITED LECTURES PRESENTED AT UNIVERSITIES
AND OTHER SCIENTIFIC CENTERS (UNPUBLISHED)**

1. Bielejewska A.

Liquid chromatography and capillary electrophoresis in supramolecular chemistry.

Bogatski Institute of Physical Chemistry, Odessa, Ukraine, 2005.

2. Izydorzak M.

Przejścia fazowe w układzie asymetrycznym {0.21 kofeina + 0.79 CO₂} w szerokich zakresach p i T.

Warsaw University of Technology, Physical Chemistry Department, Warsaw, Poland, 2005.

3. Kutner W.

Composition, surface topography, and electrochemical properties of electrophoretically deposited nanostructured fullerene films.

Institute of Chemistry of the Chinese Academy of Sciences, Beijing, China, 2005.

4. Kutner W.

Interactions of fullerenes in Langmuir-Blodgett films.

Abteilung Elektrochemie und leitfähige Polymere, Institut für Festkörper-und Werkstofforschung (IFW), Dresden, Germany, 2005.

5. **Luboradzki R.**
Sugar-based organogelators.
Bogatski Institute of Physicochemistry, Odessa, Ukraine, 2005.
6. **Orłowska M.**
Wpływ ciśnienia na przejścia fazowe w wodnych emulsjach skrobi.
Warsaw University of Technology, Physical Chemistry Department,
Warsaw, Poland, 2005.
7. **Randzio S.L.**
Analyse transitionométrique du polymorphisme de théophilline.
Université Paris-Sud (XI), Faculté de Pharmacie, Châtenay-Malabry,
France, 2005.
8. **Randzio S.L.**
Etudes transitionométriques autour des points critiques.
Université de Pau et des Pays de l'Adour, Département de Physique,
Pau, France, 2005.
9. **Randzio S.L.**
Transitionométrie dans le domaine des technologies supercritiques.
Université Paris-Sud (XI), Faculté de Pharmacie, Châtenay-Malabry,
France, 2005.
10. **Randzio S.L.**
Transitionométrie des polymères.
Université de Rouen, Faculté des Sciences, Institut des Matériaux,
France, 2005.
11. **Randzio S.L.**
Tranzycjometria skaningowa: podstawy działania i przykłady.
Warsaw University of Technology, Physical Chemistry Department,
Warsaw, Poland, 2005.
12. **Stobiński L.**
Carbon nanotubes - new material of the 21st century.
National University of Singapore, Nanoscience and Nanotechnology
Initiative, Singapore, 2005.
School of Electric & Electronic Engineering, Nanyang Technological
University, Singapore, 2005.

- 13. Stobiński L.**
Ultra-high vacuum system for adsorption-desorption studies of hydrogen storage in carbon nanotubes.
- 14. Suwińska K.**
Duże związki cykliczne typu kaliksarenów.
Warsaw University, Chemistry Department, Warsaw, Poland, 2005.
- 15. Suwińska K.**
Kompleksy inkluzyjne tworzone przez kalikspirole.
Warsaw University, Chemistry Department, Warsaw, Poland, 2005.
- 16. Świerczyński D., Kalchenko V.I., Lipkowski J.**
Resorcinarene –pyrazine complexes of different stoichiometry.
Bogatski Institute of Physicochemistry, Odessa, Ukraine, 2005.

DEPARTMENT III

SOFT CONDENSED MATTER AND FLUIDS

Head of the Department: prof. dr hab. Robert Holyst

Phone: +48 22 343 34 07

MONOGRAPH

1. **Holyst R., Poniewierski A., Ciach A.**
Termodynamika dla chemików, fizyków i inżynierów.
UKSW, Warsaw, Poland, 2005, pp. 1-434.

PAPERS PUBLISHED IN SCIENTIFIC JOURNALS

1. **Abraham D.B., Maciołek A.**
Exact results for corner filling on a quadratic lattice.
Phys. Rev. E., **72**, 031601-1 to 14 (2005).
2. **Babin V., Holyst R.**
Condensation of a vapor bubble in submicrometer container.
J. Chem. Phys., **123**, 104705-1 to 6 (2005).
3. **Babin V., Holyst R.**
Evaporation of a sub-micrometer droplet.
J. Phys. Chem. B, **109**, 11367-11372 (2005).
4. **Babin V., Holyst R.**
Evaporation of a thin liquid film.
J. Chem. Phys., **122**, 024713-1 to 8 (2005).

5. **Ciach A.**
Wetting and capillary condensation in self-assembling systems.
Annales Universitatis Mariae Curie-Sklodowska Lublin-Polonia,
Sectio AA, **LVIII**, 37-55 (2003).
6. **Ciach A., Stell G.**
Mesoscopic field theory of ionic systems.
Int. J. Mod. Phys. B., **19**, 3309-3343 (2005).
7. **Cybulski O., Babin V., Holyst R.**
Minimization of the Renyi entropy production in the space-partitioning
process.
Phys. Rev. E, **71**, 046130-1 to 10 (2005).
8. **Cybulski O., Holyst R.**
Tiling a plane in a dynamical process and its applications to arrays of
quantum dots, drums, and heat transfer.
Phys. Rev. Lett., **95**, 088304-1 to 4 (2005).
9. **Cybulski O., Matysiak D., Babin V., Holyst R.**
Pattern formation in nonextensive thermodynamics: Selection criterion
based on the Renyi entropy production.
J. Chem. Phys., **122**, 174105-1 to 8 (2005).
10. **Demyanchuk I., Staniszewski K., Holyst R.**
Coalescence-induced coalescence and dimensional crossover during the
phase separation in ternary surfactant/polymer/water mixtures.
J. Phys. Chem. B, **109**, 4419-4424 (2005).
11. **Fialkowski M., Holyst R.**
Global symmetry breaking in the nonconserved order parameter system
during phase ordering.
Eur. Phys. J. E, **16**, 247-251 (2005).
12. **Furmaniak S., Gauden P.A., Terzyk A.P., Rychlicki G.,
Wesołowski R.P., Kowalczyk P.**
Heterogeneous Do-Do model of water adsorption on carbons.
J. Colloid Interface Sci., **200**, 1-13 (2005).

- 13. Garstecki P., Fuerstman M.J., Whitesides G.M.**
Oscillations with uniquely long periods in a microfluidic bubble generator.
Nature Physics, **1**, 168-171 (2005).
- 14. Gózdź W.T.**
Influence of spontaneous curvature and microtubules on the conformations of lipid vesicles.
J. Phys. Chem. B, **109**, 21145-21149 (2005).
- 15. Gózdź W.T.**
Phase separation of the Widom-Rowlinson mixture in confined geometry.
J. Chem. Phys. **122**, 074505-1 to 7 (2005).
- 16. Harnau L., Kondrat S., Poniewierski A.**
Phase behavior of nematic liquid crystal in contact with a chemically and geometrically structured substrate.
Phys. Rev. E., **72**, 011701-1 to 7 (2005).
- 17. Hołyst R.**
Infinite networks of surfaces.
Nature Mater., **4**, 510-511 (2005).
- 18. Hołyst R.**
Some features of soft matter systems.
Soft Matter, **1**, 329-333 (2005).
- 19. Hołyst R., Staniszewski K., Demyanchuk I.**
Ordering in surfactant mixtures induced by polymers.
J. Phys. Chem. B, **109**, 4881-4886 (2005).
- 20. Hołyst R., Staniszewski K., Patkowski A., Gapiński J.**
Hidden minima of the Gibbs free energy revealed in a phase separation in polymer/surfactant/water mixture.
J. Phys. Chem. B, **109**, 8533-8537 (2005).
- 21. Kondrat S., Poniewierski A., Harnau L.**
Nematic liquid crystal in contact with periodically patterned surfaces.
Liquid Crystals, **32**, 95-105 (2005).

- 22. Kowalczyk P., Holyst R., Tanaka H., Kaneko K.**
Distribution of carbon nanotube sizes from adsorption measurements and computer simulation.
J. Phys. Chem. B., **109**, 14659-14666 (2005).
- 23. Kowalczyk P., Jaroniec M., Kaneko K., Terzyk A.P., Gauden P.A.**
Improvement of the Derjaguin-Broekhoff-de Boer theory for the capillary condensation/evaporation of nitrogen in spherical cavities and its application for the pore size analysis of silicas with ordered cage-like mesopores.
Langmuir, **21**, 10530-10536 (2005).
- 24. Kowalczyk P., Kaneko K., Solarz L., Terzyk A.P., Tanaka H., Holyst R.**
Modeling of the hysteresis phenomena in finite-sized slitlike nanopores. Revision of the recent results by rigorous numerical analysis.
Langmuir, **21**, 6613-6627 (2005).
- 25. Kowalczyk P., Tanaka H., Holyst R., Kaneko K., Ohmori T., Miyamoto J.**
Storage of hydrogen at 303 K in graphite slitlike pores from Grand canonical Monte Carlo simulation.
J. Phys. Chem. B., **109**, 17174-17183 (2005).
- 26. Kowalczyk P., Tanaka H., Kaneko K., Terzyk A.P., Do D.D.**
Grand canonical Monte Carlo simulation study of methane adsorption at an open graphite surface and in slitlike carbon pores at 273 K.
Langmuir, **21**, 5639-5646 (2005).
- 27. Stecki J.**
Variation of lateral tension and a new transition in model bilayers made of chain molecules.
J. Chem. Phys., **122**, 111102-1 to 4 (2005).
- 28. Tasynevykh M., Ciach A.**
Swollen lamellar phases confined in capillarylike pores.
Phys. Rev E, **72**, 061704-1 to 10 (2005).
- 29. Weibel D.B., Garstecki P., Whitesides G.M.**
Combining microscience and neurobiology.
Curr. Opin. Neurobiol., **15**, 560-567 (2005).

30. **Wieczorek S.A., Freyssingas E., Holyst R.**
Relaxation processes in semidilute solutions of polymers in liquid crystal solvents.
J. Phys. Chem. B., **109**, 16252-16262 (2005).
31. **Żywociński A., Pawlak K., Holyst R., Oswald P.**
Chirality-biased point defects dynamics on a disclination line in a nematic liquid crystal.
J. Phys. Chem. B, **109**, 9712-9718 (2005).

PAPERS IN PRESS IN SCIENTIFIC JOURNALS

1. **Garstecki P., Fuerstman M.J., Whitesides G.M.**
Formation of bubbles and droplets in microfluidic systems.
Bull. Pol. Acad. Sci.,
2. **Maciolek A., Dietrich S.**
Critical Casimir effect in ^4He - ^3He films.
Europhys. Lett.,
3. **Drzewiński A., Maciolek A., Szota K.**
On the surface critical behavior of Ising strips.
J. Phys.: Condens. Matter.,

LECTURES AND COMMUNICATIONS PRESENTED AT SCIENTIFIC CONFERENCES

1. **Ciach A.**
Effects of confinement on self-assembling systems.
Workshop Confined Complex Liquids, Soft-Link and University of Amsterdam, Amsterdam, Netherlands, 2005.
2. **Ciach A., Gózdź W.T., Stell G.**
Mesoscopic theory for highly charged colloids in pure water.
1st Warsaw School of Statistical Physics, Warsaw University, Kazimierz Dolny, Poland, 2005.

3. **Ciach A., Gózdź W.T., Stell G.**
Mesoscopic theory for highly charged colloids in pure water.
6th Liquid Matter Conference, EPS an University of Utrecht, Utrecht, Netherlands, 2005.
4. **Cybulski O., Hołyst R.**
Honeycomb conjecture for the Laplacian eigenvalues-tiling a plane in a dynamical process.
18th Marian Smoluchowski Symposium on Statistical Physics, Zakopane, Poland, 2005.
1st Warsaw School of Statistical Physics, Kazimierz Dolny, Poland, 2005.
5. **Hołyst R.**
Polarization dislocation coupling in freely suspended ferroelectric LC films.
X Conference on Ferroelectric Liquid Crystals FLC 2005, Stare Jabłonki, Poland, 2005 (*invited lecture*).
6. **Maciolek A., Dietrich S.**
Thermodynamic Casimir effect near critical and tricritical points in superfluid films.
6th Liquid Matter Conference, Utrecht, Holland, 2005.
7. **Tabaka M., Hołyst R.**
How to simulate gene expression?
18th Marian Smoluchowski Symposium on Statistical Physics, Zakopane, Poland, 2005.
8. **Wieczorek S.A., Freyssingeas E., Hołyst R.**
Relaxation processes in semidilute solutions of polymers in liquid crystal solvents.
XVI Conference on Liquid Crystals CLC 2005, Stare Jabłonki, Poland, 2005.
9. **Wieczorek S.A., Freyssingeas E., Hołyst R.**
Relaxation processes in mixtures of polymers and liquid crystals.
3rd Thermodynamics Polish-French Days, Carry le Rouet, Marseil, France, 2005.

10. **Żywociński A., Pawlak K., Hołyst R., Oswald P.**
Chirality-based point defects dynamics on a disclination line in a nematic liquid crystal.
XVI Conference on Liquid Crystals CLC 2005, Stare Jabłonki, Poland, 2005.

**INVITED LECTURES PRESENTED AT UNIVERSITIES AND
OTHER SCIENTIFIC CENTERS (UNPUBLISHED)**

1. **Ciach A.**
Mesoscopic theory of phase transitions in colloidal systems.
IPPT PAN Seminar, Warsaw, Poland, 2005.
2. **Garstecki P.**
Bubbles in microfluidics- formation, non-linear phenomena and applications.
Massachusetts Institute of Technology, Hatsopoulos Microfluids Seminar Series, USA, 2005.
3. **Hołyst R.**
Kilka słów o entropii.
Institute of Experimental Physics, J. Pniewski Seminar, Warsaw University, Warsaw, Poland, 2005.
4. **Hołyst R.**
O parowaniu kropli.
Institute of Physics PAS, Warsaw, Poland, 2005.
5. **Hołyst R.**
Parowanie/kondensacja w mikroskali od pikosekund do mikrosekund.
A. Mickiewicz University, Dept. of Physics, Poznań, Poland, 2005.
6. **Hołyst R.**
Po co patrzymy na gwiazdy, czyli rzecz o środowisku naturalnym człowieka.
Physics in Lasek Bielański, UKSW, Warsaw, Poland, 2005.

7. **Holyst R.**
Separacja faz w mieszaninach polimeru, surfaktantu i wody.
A. Mickiewicz University, Dept. of Molecular Biophysics, Poznań,
Poland, 2005.
8. **Holyst R.**
Zasady wariacyjne w podziale przestrzeni i w tworzeniu struktur.
Silesian University, Dept. of Physics, Katowice, Poland, 2005.
9. **Maciolek A.**
Critical Casimir effect in ^4He - ^3He films.
Max-Planck Institut für Metallforschung, Stuttgart, Germany, 2005.
University of Mainz, Dept. of Physics, Germany, 2005.
Oxford University, Dept. of Theoretical Physics, Great Britain, 2005.
Open University, Milton Keynes, Great Britain, 2005.
University of Bristol, Dept. of Physics, Great Britain, 2005.

DEPARTMENT IV
CHEMICAL DYNAMICS

Head of the Department: **prof. dr hab. Ryszard Duś**
Phone: +48 22 343 34 29

**PAPERS PUBLISHED IN SCIENTIFIC JOURNALS AND
PROCEEDINGS OF SCIENTIFIC CONFERENCES**

- 1. Cukrowski A.S., Kolbus A.**
Nonequilibrium thermodynamic and kinetic description of chemical reaction.
Annals Polish Chem. Soc., **3/3**, 1275-1278 (2004).
- 2. Cukrowski A.S., Kolbus A.**
On validity of linear phenomenological nonequilibrium thermodynamics equations in chemical kinetics.
Acta Phys. Polon. B, **26**, 1485-1507 (2005).
- 3. Duś R., Nowakowski R., Nowicka E.**
Chemical and structural components of work function changes in the process of palladium hydride formation within thin Pd film.
J. Alloy. Compd., **404-406**, 284-287 (2005).
- 4. Duś R., Nowicka E.**
Adsorption and desorption states of deuterium on sintered thin gold films.
Polish J. Chem., **79**, 1205-1216 (2005).
- 5. Górecka J.N., Górecki J.**
On one dimensional chemical diode and frequency generator constructed with an excitable surface reaction.
Phys. Chem. Chem. Phys., **7**, 2915-2920 (2005).

6. **Górecki J., Górecka J.N.**
Chemical wave based programming in reaction-diffusion systems.
Proc. of ECAL2005 Workshop on Unconventional Computing (eds. C. Teuscher, A. Adamatzky), 13-22 (2005).
7. **Górecki J., Górecka J.N., Yoshikawa K., Igarashi Y., Nagahara H.**
Sensing the distance to a source of periodic oscillations in a nonlinear chemical medium with the output information coded in frequency of excitation pulses.
Phys. Rev. E, **72**, 046201 (2005).
8. **Keim E.G., Lisowski W.**
TEM studies of conglomeration of single-wall carbon nanotubes under atomic deuterium interaction.
Microsc. Microanal., **11**, 1940-1941CD (Suppl 2) (2005).
9. **Kobiela T., Kaszkur Z., Duś R.**
Fabrication of Au nanostructures In the proces sof amalgam formation followed Au-Hg alloy thermal decomposition.
Thin Solid Films, **478**, 152-158 (2005).
10. **Lemarchand A., Nowakowski B.**
Coherence resonances in an autonomous thermochemical model with internal fluctuations.
Europhys. Lett., **71**, 530-535 (2005).
11. **Lisowski W., Keim E.G., van den Berg A.H.J., Smithers M.A.**
Structural and chemical evolution of single-wall carbon nanotubes under atomic and molecular deuterium interaction.
Carbon, **43**, 1073-1083 (2005).
12. **Litniewski M.**
The influence of the quencher concentration on the rate of simple bimolecular reaction: Molecular dynamics study.
J. Chem. Phys., **123**, 124506-1 to 9 (2005).
13. **Litniewski M., Górecki J.**
Kinetics of fluorescence quenching for electron transfer and for energy transfer. Molecular dynamics tests for spherical molecules.
J. Chem. Phys., **122**, 204504-1 to 9 (2005).

- 14. Litniewski M., Górecki J.**
On the applicability of the Smoluchowski approach to diffusion controlled reactions. Molecular dynamics simulations and theory. Acta Phys. Pol. B, **36**, 1677-1691 (2005).
- 15. Nowakowski B., Kawczyński A.L.**
Master equation simulations of bistable and excitable dynamics in a model of thermochemical system. J. Phys. Chem. A, **109**, 3134-3138 (2005).
- 16. Rachwalska M., Kawczyński A.L.**
Regularities in complex asymptotic oscillations in the Belousov-Zhabotinsky reaction, at various residence times and inflow malonic acid concentration. Polish J. Chem., **79**, 135-143 (2005).
- 17. Shaik O.S., Kammerer J., Górecki J., Lebiedz D.**
Derivation of a quantitative minimal model for the photosensitive Belousov-Zhabotinsky reaction from a detailed elementary-step mechanism. J. Chem. Phys., **123**, 234103-1 to 10 (2005).

**ORIGINAL PAPERS IN PRESS IN SCIENTIFIC JOURNALS
AND PROCEEDINGS OF SCIENTIFIC CONFERENCES**

- 1. Górecki J., Górecka J.N.**
On mathematical description of information processing in chemical systems.
GAKUTO International, Mathematical Series,
- 2. Hansen J.S., Nowakowski B., Lemarchand A.**
Molecular dynamics simulations and master equation description of a chemical wave front: effects of density and size of reaction zone on propagation speed.
J. Chem. Phys.,

3. **Lisowski W., Keim E.G., van den Berg A.H.J., Smithers M.A.**
Thermal desorption of deuterium from modified carbon nanotubes and its correlation to the microstructure.
Carbon,
4. **Maranda-Niedbala A., Nowakowski R.**
AFM of titanium nitride layers prepared under discharge conditions.
J. Alloy. Compd.,
5. **Nowakowski B., Kawczyński A.L.**
Multi-peak distributions of first passage times in bistable dynamics in a model of thermochemical system.
ChemPhysChem,

LECTURES AND COMMUNICATIONS PRESENTED AT SCIENTIFIC CONFERENCES

1. **Cukrowski A.S., Kolbus A.**
Opis izobary Van't Hoffa na przykładzie syntezy Habera amoniaku.
XLVIII Zjazd PTChem i SITPChem, Poznań, Poland, 2005.
2. **Cukrowski A.S., Kolbus A., Krolkowski P.**
Równanie Arrheniusa dla prostych modeli na przekroj czynny w reagującym gazie a izobara Van't Hoffa.
XLVIII Zjazd PTChem i SITPChem, Poznań, Poland, 2005.
3. **Duś R.**
Chemical and structural components of work function changes in the process of transition metal hydrides formation.
International Workshop on Surface Physics 2005, ECOSS 23 (Satellite)
Polanica, Poland, 2005 (*invited lecture*).
4. **Górecki J.**
Chemical programming in reaction-diffusion systems.
Workshop on Unconventional Computing, University of Kent,
Canterbury, UK, 2005.

5. **Górecki J.**
On the chemical programming.
The Summer School on Design and Control of Self-Organization in Physical, Chemical and Biological Systems. Trieste, Italy, 2005.
6. **Górecki J.**
The Grand Challenges in Non-Classical Computation Workshop, York, UK, 2005.
7. **Grzeszczak-Koldys P., Nowakowski R., Cieślak D., Duś R.**
The influence of carbon impurities on the direction of stress relaxation within thin Pd film in the process of hydride formation.
International Workshop on Surface Physics 2005, ECOSS-23 Satellite Advanced and Bio-Materials, Polanica Zdrój, Poland, 2005.
8. **Grzeszczak-Koldys P., Nowakowski R., Duś R.**
Direction of stress relaxation within thin Pd film in the process of hydride formation.
International Hydrogen Energy Congress and Exhibition, Istanbul, Turkey, 2005.
IInd Warsaw Seminar for PhD Students in Chemistry – ChemSession'05, Warsaw, Poland, 2005.
9. **Keim E.G., Lisowski W.**
TEM studies of conglomeration of single-wall carbon nanotubes under atomic deuterium interaction.
Microscopy & Microanalysis 2005 Meeting, Honolulu, USA, 2005.
10. **Litniewski M.**
Molecular dynamics simulations of fluorescence quenching for distance dependent sink terms and for different quencher concentrations.
18th M. Smoluchowski Symposium on Statistical Physics, Zakopane, Poland, 2005.
11. **Nowakowski R.**
The response of metal substrates to the adsorption of large organic molecules and to carbon impurities implantation.
8th International Symposium on Electrochemical/Chemical Reactivity of Metastable Materials, Szeged, Hungary, 2005 (*invited lecture*).

DEPARTMENT V
CATALYSIS ON METALS

***Head of the Department:* prof. dr hab. Zbigniew Karpiński**
Phone: +48 22 343 33 56

MONOGRAPH

- 1. Tobiś J.**
Turbulentny przepływ gazu w wypełnieniach o złożonej geometrii.
Prace Wydziału Inżynierii Chemicznej i Procesowej PW, T. XXIX,
pp. 1-135.

**PAPERS PUBLISHED IN SCIENTIFIC JOURNALS AND
PROCEEDINGS OF SCIENTIFIC CONFERENCES**

- 1. Bonarowska M., Karpiński Z.**
n-Butane conversion on differently pretreated supported palladium
catalysts.
Polish J. Chem. **79**, 1821-1828 (2005).
- 2. Dygas J.R., Kopec M., Krok F., Lisovytskiy D., Pielaszek J.**
Conductivity and dielectric relaxation phenomena in lithium
manganese spinel.
Solid State Ionics, **176**, 2153-2161 (2005).
- 3. Gliński M., Szymański W., Łomot D.**
Catalytic ketonization over oxide catalysts. X. Transformation of
various alkyl heptanoates.
Appl. Catal. A: General, **281**, 107-113 (2005).

4. **Gmachowski L.**
Aggregate structure and hydrodynamics of aggregated systems.
Colloids Surfaces A: Physicochem. Eng. Aspects, **255**, 105-110
(2005).
5. **Gmachowski L.**
Fractal aggregate model of sedimenting macromolecules.
Polymer, **46**, 10443-10449 (2005).
6. **Kaszukur Z., Mierzwa B., Pielaszek J.**
Ab initio test of the Warren-Averbach analysis on model palladium
nanocrystals.
J. Appl. Cryst., **38**, 266-273 (2005).
7. **Laberty Robert Ch., Fontaine M.L., Mounis T., Mierzwa B.,
Lisovytskiy D., Pielaszek J.**
X-ray diffraction studies of perovskite or derived perovskite phase
formation.
Solid State Ionics, **176**, 1213–1223 (2005).
8. **Lisovytskiy D., Kaszukur Z., Pielaszek J., Marzantowicz M.,
Dygas J.R.**
In situ impedance and X-ray diffraction study of phase transformation
in lithium manganese spinel.
Solid State Ionics, **176**, 2059-2064 (2005).
9. **Lisovytskiy D., Pielaszek J., Baumer V.N., Marzantowicz M.,
Dygas J.R.**
Phase transition in Li-Mn spinels; in situ XRD and impedance
spectroscopy analysis.
Acta Cryst., **A61**, c326 (2005).
10. **Mierzwa B.**
EXAFS studies of bimetallic palladium-cobalt nanoclusters using
molecular dynamics simulations.
J. Alloys Compds, **362**, 127-134 (2005).
11. **Paszkowicz W., Kowalski B.J., Görlich E.A., Kaszukur Z.**
The growing role of synchrotron radiation in physics, chemistry and
Mater. Sci..
J. Alloys Compds, **401**, 1-2 (2005).

- 12. Pielaszek J., Mierzwa B., Medjahdi G., Mareche J.F., Puricelli S., Celzard A., Furdin G.**
Molybdenum carbide catalyst formation from precursors deposited on active carbons; XRD studies.
Appl. Catal. A-Gen., **296**, 232-237 (2005).
- 13. Śrębowata A., Juszczak W., Karpiński Z.**
Hydrodechlorination of 1,2-dichloroethane on modified palladium catalysts.
Polish J. Environ. Studies, **13**, 103-106 (2004).
- 14. Szmigiel D., Rarog-Pilecka W., Miskiewicz E., Maciejewska E., Kaszkur Z., Sobczak J.W.¹, Kowalczyk Z.**
Ammonia synthesis over the Ba-promoted ruthenium catalysts supported on boron nitride.
Catal. Lett., **100**, 79-87 (2005).
- 15. Ziajka J., Pasiuk-Bronikowska W.**
Rate constants for atmospheric trace organics scavenging $\text{SO}_4^{\cdot-}$ in the Fe-catalysed autoxidation of S(IV).
Atmos. Environ., **39**, 1431-1438 (2005).
- 16. Ziółkowska I., Ziółkowski D.**
Stochastic approach to modeling and analyzing of gas flow field in tubes packed randomly with spherical catalyst pellets.
Chem. Eng. Process., **44**, 1167-1180 (2005).
- 17. Znak L., Stolecki K., Zieliński J.**
The effect of cerium, lanthanum and zirconium on nickel/alumina catalysts for the hydrogenation of carbon oxides.
Catal. Today, **101**, 65-71 (2005).

¹ Department VI

PAPERS IN PRESS IN SCIENTIFIC JOURNALS AND PROCEEDINGS OF SCIENTIFIC CONFERENCES

- 1. Borodziński A., Bond G.C.**
Selective hydrogenation of ethyne in ethene-rich streams on palladium catalysts. Part 1. Effect of changes to the catalyst during reaction.
Catal. Rev.: Sci. Eng.,
- 2. Fontaine M.L., Laberty-Robert Ch., Verelst M., Pielaszek J., Ansart F., Tailhades P.**
Understanding the polymer-oxide transition in order to prepare controlled $\text{La}_2\text{NiO}_{4+\delta}$ oxides.
Mater. Res. Bull.,
- 3. Gmachowski L.**
Scale-invariant growth of fractal aggregates.
Colloids Surfaces A: Physicochem. Eng. Aspects,
- 4. Kaszkur Z.**
Test of applicability of some powder diffraction tools to nanocrystals.
Z. Kristallogr.,
- 5. Michalski J.A.**
Inorganic, wet flue gas desulfurization (FGD) technologies – a review.
Research Trends in Chemical Engineering,
- 6. Pasiuk-Bronikowska W., Bronikowski T.**
Studies on nitrate-affected SO_2 oxidation and their perspectives.
Proceedings of the NATO Advanced Research Workshop,
Environmental Simulation Chambers: Application to Atmospheric
Chemical Processes (eds I. Barnes, K.J. Rudziński), Zakopane,
Poland, 2004.
- 7. Rudziński K.J.**
Heterogeneous and Aqueous-Phase Transformations of Isoprene.
Proceedings of the NATO Advanced Research Workshop,
Environmental Simulation Chambers: Application to Atmospheric
Chemical Processes (eds I. Barnes, K.J. Rudziński), Zakopane,
Poland, 2004.

- 8. Rudziński K.J., Ziajka J.**
Environmental significance of aqueous-phase reactions of atmospheric organic trace-compounds.
Proc. Central European Conference ECOpole'05. Chemical Substances in Environment, Jamrozowa Polana – Hradec Kralove, Poland, Czech Republic, 2005 (ed. M. i W. Waclawek)
Towarzystwo Chemii i Inżynierii Ekologicznej, Opole, Poland,
- 9. Szeremeta E., Rudziński K.J.**
Transformation of manganese in catalytic autoxidation of sulfur (IV).
Proc. Central European Conference ECOpole'05. Chemical substances in environment, Jamrozowa Polana – Hradec Kralove, Poland, Czech Republic, 2005 (ed. M. i W. Waclawek)
Towarzystwo Chemii i Inżynierii Ekologicznej, Opole, Poland,
- 10. Tobisz J.**
Flow modelling within non-homogeneous packings. The structural macro-correlations.
Chem. Eng. Sci.,

LECTURES AND COMMUNICATIONS PRESENTED AT SCIENTIFIC CONFERENCES

- 1. Bonarowska M., Karpiński Z.**
Hydrodechlorination CCl_2F_2 (CFC-12) over carbon-supported palladium-gold catalysts.
2nd International School-Conference on Catalysis for Young Scientists, Novosibirsk-Altai, Russia, 2005
- 2. Kaszkur Z.**
Interaction of NO and CO with surface of Pd nanoclusters studied by XRD.
XX Congress of the International Union of Crystallography, Florence, Italy, 2005.

3. **Kopeć M., Lisovytskiy D., Marzantowicz M., Dygas J.R., Krok F., Kaszukur Z., Pielaszek J.**
X-ray diffraction and impedance spectroscopy studies of lithium manganese oxide spinel.
Alistore Summer School on Synthesis of Nanostructured Materials for Polymer Batteries, Augustów, Poland, 2005.
4. **Legawiec-Jarzyna M., Juszczyk W., Karpiński Z.**
Hydrodechlorination of tetrachloromethane on Pt/Al₂O₃ catalysts.
37 Ogólnopolskie Kolokwium Katalityczne, Kraków, Poland, 2005.
5. **Lisovytskiy D., Pielaszek J., Baumer V.N., Marzantowicz M., Dygas J.R.**
Phase transition in Li-Mn spinels; in situ XRD and impedance spectroscopy analysis.
XX Congress of the International Union of Crystallography, Florence, Italy, 2005.
6. **Rudziński K.J., Ziajka J.**
Environmental significance of aqueous-phase reactions of atmospheric organic trace-compounds.
Central European Conference ECOpole'05. Chemical Substances in Environment, Jamrozowa Polana – Hradec Kralove, Poland, Czech Republic, 2005.
7. **Śrębowata A., Juszczyk W., Karpiński Z.**
Catalytic removal of chlorine from 1,2-dichloroethane.
Catalysis and Adsorption in Fuels Processing and Environmental Protection, Kudowa Zdrój, Poland, 2005.
2nd International School-Conference on Catalysis for Young Scientists, Novosibirsk-Altai, Russia, 2005.
8. **Śrębowata A., Juszczyk W., Karpiński Z.**
Hydrodechlorination of 1,2-dichloroethane on modified palladium catalysts.
37 Ogólnopolskie Kolokwium Katalityczne, Kraków, Poland, 2005.

9. **Szeremeta E., Rudziński K.J.**
Transformation of manganese in catalytic autoxidation of sulfur(IV).
Central European Conference ECOpole'05. Chemical Substances in
Environment, Jamrozowa Polana – Hradec Kralove, Poland, Czech
Republic, 2005.
10. **Znak L., Zieliński J.**
The interaction of hydrogen with unsupported and supported nickel.
37 Ogólnopolskie Kolokwium Katalityczne; Kraków, Poland, 2005.
11. **Znak L., Zieliński J.**
Effect of support on hydrogen adsorption on nickel.
2nd International School-Conference on Catalysis for Young
Scientists, Novosibirsk-Altai, Russia, 2005.
12. **Znak L., Zieliński J., Stołeczki K., Narowski R.**
Wpływ ceru i lantanu na nikielowe katalizatory metanizacji tlenków
węgla.
Spotkanie Producentów i Użytkowników Katalizatorów, Podlesice
k/Kroczyce, Poland, 2005.

**INVITED LECTURES PRESENTED AT UNIVERSITIES AND
OTHER SCIENTIFIC CENTERS (UNPUBLISHED)**

1. **Gmachowski L.**
Wzrost i rozpad agregatów fraktalnych.
Warsaw University of Technology, Płock, Poland, 2005.
2. **Kaszur Z.**
XRD methodology for nanoparticles characterization.
Henri Poincare Universite, Faculte des Sciences et Techniques,
Nancy, France, 2005.
3. **Kaszur Z.**
Interaction of palladium nanoparticles with hydrogen.
Universite Pierre et Marie Curie, Laboratoire de Reactivite de Surface,
Paris, France, 2005.

DEPARTMENT VI
ELECTROCHEMISTRY, CORROSION AND
APPLIED SURFACE SCIENCE

Head of the Department: prof. dr hab. Tadeusz Zakroczymski
Phone: +48 22 343 32 34

MONOGRAPHS

- 1. Góral M.**
Liquid–vapor equilibria and excess Gibbs Energy of 2–propanone + hydrocarbons systems,
in: „International Data Series–Selected data on Mixtures vol. 33”
National Institute of Standards and Technology, Gaithersburg, US,
2005, pp. 111 – 131.

- 2. Góral M., Skrzecz A.**
Liquid–vapor equilibria of C₄ hydrocarbon systems,
in: „International Data Series–Selected data on Mixtures vol. 33”
National Institute of Standards and Technology, Gaithersburg, US,
2005, pp. 212–227.

- 3. Gracia M., Skrzecz A.**
Liquid–vapor equilibria, and excess volume of alkanols + ethers,
in: „International Data Series–Selected data on Mixtures vol. 33”
National Institute of Standards and Technology, Gaithersburg, US,
2005, pp. 25–46.

4. **Gracia M., Skrzecz A.**
Liquid–vapor equilibria, excess Gibbs, excess enthalpy, and excess volume of bromobutane + alcohols,
in: „International Data Series–Selected data on Mixtures vol. 33”
National Institute of Standards and Technology, Gaithersburg, US,
2005, pp. 1–24.
5. **Monton J.B., Skrzecz A.**
Liquid–vapor equilibria of 2–methyl–2–propanol +hydrocarbon,
in: „International Data Series–Selected data on Mixtures vol. 33”
National Institute of Standards and Technology, Gaithersburg, US,
2005, pp. 97 – 104.

PAPERS PUBLISHED IN SCIENTIFIC JOURNALS AND PROCEEDINGS OF SCIENTIFIC CONFERENCES

1. **Barlak M., Olesińska W., Piekoszewski J., Chmielewski M., Jagielski J., Kaliński D., Werner Z., Sartowska B.**
Ion implantation as a pretreatment method of AlN substrate for direct bonding with copper.
Vacuum, **78**, 205-209 (2005).
2. **Baszkiewicz J., Krupa D., Kozubowski J.A., Rajchel B., Barcz A., Sobczak J.W., Biliński A.**
Effect of sodium-ion implantation on the corrosion resistance of titanium and Ti6Al4V alloy.
Proceedings of 16th International Corrosion Congress, Beijing, China, 2005.
3. **Baszkiewicz J., Krupa D., Kozubowski J.A., Rajchel B., Barcz A., Sobczak J.W., Biliński A.**
Effect of sodium-ion implantation on the corrosion resistance of Co-Cr-Mo alloy (Vitalium).
Proceedings of the European Corrosion Congress EUROCORR 2005, Lisbon, Portugal, 2005.

4. **Baszkiewicz J., Krupa D., Kozubowski J.A., Rajchel B., Barcz A., Sobczak J.W., Biliński A.**
Wpływ implantacji jonów sodu na odporność korozyjną tytanu i stopu tytanu Ti6Al4V.
Proceedings of the VIII Polish Conference: Tytan i jego stopy, Warsaw-Serock, Poland, 2005.
5. **Baszkiewicz J., Krupa D., Mizera J., Barcz A., Sobczak J.W., Biliński A.**
Effect of alkali-and heat treatment on the corrosion resistance of titanium.
Proceedings of the European Corrosion Congress EUROCORR 2005, Lisbon, Portugal, 2005.
6. **Baszkiewicz J., Krupa D., Mizera J., Sobczak J.W., Biliński A.**
Corrosion resistance of the surface layers formed on titanium by plasma electrolytic oxidation and hydrothermal treatment.
Vacuum, **78**, 143-147 (2005).
7. **Domżalicki P., Łunarska E.**
Effect of bacteria on hydrogen uptake by low alloy steels cathodically protected in sea water.
Ochrona przed Korozją, **48**, 217-220 (2005).
8. **Drelinkiewicz A., Hasik M., Sobczak J.W., Sobczak E., Bernasik A., Bielańska E.**
Physicochemical and catalytic properties of palladium supported on poly(*o*-methoxyaniline).
Materials Research Bulletin, **40**, 869-889 (2005).
9. **Flis J.**
Azotowanie plazmowe i jego wpływ na odporność korozyjną stali nierdzewnych.
Ochrona przed Korozją, **47**, 86-89 (2005).
10. **Flis J.**
Effect of phosphorus on corrosion and passivation of iron.
Vestnik Nac. Tech. Universit. "KhPI", **15**, 11-14 (2005).

- 11. Flis J.**
Problems with determination of porosity of phosphate coatings.
Inżynieria Powierzchni, **2A**, 41-46 (2005).
- 12. Flis J., Kanoza M.**
Corrosion resistance of vinyl-triethoxy silane films on iron after exposure to air and to phosphate solution.
Inżynieria Powierzchni, **2A**, 35-39 (2005).
- 13. Flis J., Zakroczyński T., Mańkowski J.**
Surface analysis of corrosion products on various depths of nitrided stainless steels.
Ochrona przed Korozją, **11s/A**, 47-51 (2005).
- 14. Flis-Kabulska I.**
Electrodeposition of cobalt on gold studied with cyclic voltammetry and scanning probe microscopy.
Vestnik Nac. Tech. Universit. "KhPI", **16**, 7-10 (2005).
- 15. Gajek A., Zakroczyński T.**
Hydrogen evolution reaction on and hydrogen entry into iron during long-lasting cathodic polarization in an aqueous solution.
Inżynieria Powierzchni, **2A**, 159-166 (2005).
- 16. Gajek A., Zakroczyński T.**
Long-lasting hydrogen evolution on and hydrogen entry into iron in an aqueous solution.
J. Electroanal. Chem., **578**, 171-182 (2005).
- 17. Gajek A., Zakroczyński T.**
The influence of long-lasting cathodic polarization of iron on hydrogen evolution and hydrogen entry.
Vestnik Nac. Tech. Universit. "KhPI", **16**, 11-14 (2005).
- 18. Gergely G., Menyhard M., Gurban S., Jabłoński A.**
Surface excitation correction for elastic peak electron spectroscopy.
J. Surf. Anal., **12**, 140 – 145 (2005).
- 19. Gibała U., Zakroczyński T.**
Effect of strain on hydrogen absorption in iron.
Ochrona przed Korozją, **11s/A**, 205-208 (2005).

- 20. Góral M., Mączyński A., Wiśniewska–Gocłowska B.**
Recommended liquid-liquid equilibrium data, Part 3: Alkylbenzene–water systems.
J. Phys. Chem. Ref. Data, **33**, 1159-1190 (2004).
- 21. Ilieva L., Sobczak J.W., Manzoli M., Su B.-L., Andreeva D.**
Reduction behavior of nanostructured gold catalysts supported on mesoporous titania and zirconia.
Appl. Catal. A., **291**, 85-92 (2005).
- 22. Jabłoński A.**
Calculations of the electron inelastic mean free path in solids from the elastic peak intensity.
Surf. Interface Anal., **37**, 1035–1044 (2005).
- 23. Jabłoński A.**
Modelling of elastic and inelastic electron backscattering from surfaces.
Progress Surf. Sci., **79**, 3-25 (2005).
- 24. Jabłoński A.**
Role of the emission depth distribution function in quantification of electron spectroscopies.
Surf. Sci., **586**, 115-128 (2005).
- 25. Jabłoński A., Lesiak B., Zemek J., Jiricek P.**
Determination of the electron inelastic mean free path for samarium.
Surf. Sci., **595**, 1-5 (2005).
- 26. Jabłoński A., Powell C.J.**
Monte Carlo simulations of electron transport in solids: applications to electron backscattering from surfaces.
Appl. Surf. Sci., **242**, 220-235 (2005).
- 27. Jabłoński A., Powell C.J.**
The backscattering factor in Auger-electron spectroscopy: New approach for an old subject.
Surf. Sci., **574**, 219-232 (2005).

- 28. Jabłoński A., Powell C.J., Tanuma S.**
Monte Carlo strategies for simulation of electron backscattering from surfaces.
Surf. Interface Anal., **37**, 861 – 874 (2005).
- 29. Jabłoński A., Salvat F., Powell C.J.**
Evaluation of elastic-scattering cross sections for electrons and positrons over a wide energy range.
Surf. Interface Anal., **37**, 1115-1123 (2005).
- 30. Jabłoński A., Zemek J., Jiricek P.**
The backscattering factor for the Au N₆₇VV Auger transition.
Applied Surf. Sci. **252**, 905-915 (2005).
- 31. Janik-Czachor M., Jaskiewicz A., Dolata M., Werner Z.**
Passivity and its breakdown in Al-based amorphous alloys.
Mater. Chem. Phys., **92**, 348-353 (2005).
- 32. Kocańda D., Kocańda S.T., Łunarska E., Mierzyński J.**
Possibility of hydrogen-assisted propagation of short fatigue cracks in WT3-1 alloy.
Intern. J. Phys.-Chem. Mech., **41**, 25-29 (2005).
- 33. Krupa D., Baszkiewicz J., Kozubowski J.A., Barcz A., Sobczak J.W., Biliński A., Lewandowska-Szumieł M., Rajchel B.**
Effect of dual ion implantation of calcium and phosphorus on the properties of titanium.
Biomaterials, **26**, 2847-2856 (2005).
- 34. Krupa D., Baszkiewicz J., Kozubowski J.A., Mizera J., Barcz A., Sobczak J.W., Biliński A., Rajchel B.**
Corrosion resistance and bioactivity of titanium after surface treatment by three different methods: ion implantation, alkaline treatment and anodic oxidation.
Anal. & Bioanal. Chem. **381**, 617-625 (2005).

- 35. Krupa D., Baszkiewicz J., Kozubowski J.A., Mizera J., Sobczak J.W., Biliński A., Smolik J., Słomka Z.**
Effect of anodic oxidation on the corrosion resistance of the Ti6Al4V alloy.
Proceedings of 16th International Corrosion Congress, Beijing, China, 2005.
- 36. Krupa D., Baszkiewicz J., Rajchel B., Barcz A., Sobczak J.W., Biliński A.**
Effect of sodium-ion implantation on the corrosion resistance and bioactivity of titanium.
Vacuum, **78**, 161-166 (2005).
- 37. Kuczyńska M., Flis J.**
Electrochemical impedance of nitrided stainless steels in sulphate solutions.
Vestnik Nac. Tech. Universit. "KhPI", **16**, 23-26 (2005).
- 38. Kuczyńska M., Flis J.**
Pitting corrosion behaviour of stainless steels after low-temperature nitriding.
Inżynieria Powierzchni, **2A**, 27-32 (2005).
- 39. Kuczyńska-Wydorska M., Flis J.**
Effect of nitrogen and molybdenum on passivation of stainless steels in acidic sulphate solutions.
Ochrona przed Korozją, **11s/A**, 21-24 (2005).
- 40. Lesiak B., Biliński A., Józwik A.**
Segregation in CuPd alloys studied by X-ray photoelectron spectroscopy using lineshape analysis and the fuzzy k-nearest neighbour rule.
Polish J. Chem., **79**, 1365 – 1378 (2005).
- 41. Lesiak B., Biliński A., Józwik A.**
X-ray photoelectron spectroscopy and the pattern recognition method – their application to surface studies in CoPd alloys.
Surf. Interface Anal., **37**, 1143-1150 (2005).

- 42. Lesiak B., Jabłoński A., Zemek J., Jiricek P., Cernansky M.**
Studies of iron and iron oxide layers by electron spectroscopes.
Appl. Surf. Sci., **252**, 330–338 (2005).
- 43. Łunarska E.**
Pochłanianie elektrochemicznego wodoru przez fazy I stopy układu Ti-Al.
Proc. of the VIII Polish Conference „Tytan i jego stopy”, Warszawa-Serock, 2005, eds. T.Wierzchoń, J.R.Sobiecki,
PW, Warsaw, Poland, 195-203 (2005).
- 44. Łunarska E., Chernyayeva O.**
Effect of precipitates on hydrogen transport and hydrogen embrittlement of aluminium alloys.
Mater. Sci., **40**, 399-407 (2004).
- 45. Łunarska E., Chernyayeva O., Spivak L.**
Hydrogen-straining effects in Al.
J. Alloys Compd., **404-406C**, 269-272 (2005).
- 46. Łunarska E., Kropyvnyi N.**
The role of the interface reaction in the kinetics of the nonsteady-state permeation of hydrogen.
Mater. Sci., **33**, 465-477 (1998).
- 47. Łunarska E., Nikiforov K.**
Evaluation of hydrogen degradation of water-wall pipes by the surface-layer properties of magnetite.
Mater. Sci., **38**, 550-559 (2002).
- 48. Łunarska E., Nikiforov K., Pyrża J.**
Monitoring of the hydrogen charging of the industrial installations.
Inżynieria Powierzchni, **N2A**, 53-59 (2005).
- 49. Łunarska E., Nikiforov K., Tsyurulnyk O.T.**
Susceptibility of steels exploited in water-steam environments to hydrogen-induced cracking.
Mater. Sci., **39**, 877-884 (2003).

- 50. Łunarska E., Nikiforow K., Wierzchoń T., Ossowski M.**
Effect of plasma treated Ti-Al layers on corrosion behavior of Ti6Al2Cr2Mo alloy.
Vestnik Nac. Tech. Universit. KhPI, **15**, 15-19 (2005).
- 51. Łunarska E., Nikiforow K.**
Topography of the environmental degradation of nitrated layers.
Ochrona przed Korozją, **48**, 62-65 (2005).
- 52. Łunarska E., Nikiforow K., Nykyforczyn H., Wierzchoń T.**
Effect of surface modification on the hydrogen absorption by Ti-6%Al-2%Cr-2%Mo alloy.
Proc. of the EUROCORR 2005, European Corrosion Federation, Lisbon, Portugal, Ed. M.G.S. Ferreira, **CD, O-178-F** (2005).
- 53. Łunarska E., Nikiforow K., Stabryła J., Starczewski L.**
Effect of the boron alloying and laser treatment on corrosion and hydrogen charging of low alloy steel.
Inżynieria Powierzchni, **22**, 187-195 (2005).
- 54. Łunarska E., Samatowicz D.**
Effect of grinding, hydrogen charging, and oil coating on the internal friction of iron and steel.
Mater. Sci., **36**, 522-526 (2000).
- 55. Łunarska E., Stabryła J., Nikiforow K., Starczewski L.**
Boron alloying and laser treatment to improve corrosion and hydrogen resistance of 25G steel.
Intern. J. Phys.-Chem. Mech., **41**, 111-115 (2005).
- 56. Łunarska E., Zaborski S.**
Role of hydrogen in the efficiency of anodic grinding of WC-Co sintered alloy.
Mater. Sci., **37**, 551-558 (2001).
- 57. Łunarska E., Zaborski St., Ilczuk J.**
Internal friction measurements of the effects of the electrochemical-abrasive treatment of titanium alloy.
Mater. Sci., **34**, 490-496 (1999).

- 58. Mańkowski J.**
A comparison of effects of plasma and conventional gas nitriding on anodic behavior of stainless steel.
Vestnik Nac. Tech. Universit. "KhPI", **16**, 27-30 (2005).
- 59. Mańkowski J.**
Effect of the cooling rate after plasma nitriding on the corrosion resistance of nitrided stainless steels.
Inżynieria Powierzchni, **2A**, 33-38 (2005).
- 60. Mańkowski J., Zych A.**
Wpływ azotowania plazmowego stali 38HMJ na jej anodowe zachowanie w roztworze siarczanowym i chlorkowo-siarczanowym.
Ochrona przed Korozją, **11s/A**, 52-56 (2005).
- 61. Mączyński A., Shaw D.G., Góral M., Wiśniewska–Gocłowska B., Skrzecz A., Owczarek I., Błazej K., Haulait–Pirson M.–C., Hefter G.T., Kapuku F., Mączyńska Z., Young C.L.**
IUPAC-NIST Solubility Data Series, Hydrocarbons with Water and Seawater-Revised and Updated, Part 4. C₆H₁₄ Hydrocarbons with Water.
J. Phys. Chem. Ref. Data, **2**, 709–753 (2005).
- 62. Mączyński A., Shaw D.G., Góral M., Wiśniewska–Gocłowska B., Skrzecz A., Mączyńska Z., Owczarek I., Błazej K., Haulait–Pirson M.–C., Kapuku F., Hefter G.T., Szafranski A.**
IUPAC-NIST Solubility Data Series, Hydrocarbons with Water and Seawater-Revised and Updated, Part 1. C₅ Hydrocarbons with Water.
J. Phys. Chem. Ref. Data **2**, 441–446 (2005).
- 63. Mączyński A., Shaw D.G., Góral M., Wiśniewska–Gocłowska B., Skrzecz A., Owczarek I., Błazej K., Haulait–Pirson M.–C., Hefter G.T., Mączyńska Z., Szafranski A., Tsonopulos C., Young C.L.**
Solubility Data Series, Hydrocarbons with Water and Seawater-Revised and Updated, Part 2. Benzene with Water and Heavy Water.
J. Phys. Chem. Ref. Data, **2**, 477–552 (2005).

- 64. Mączyński A., Shaw D.G., Góral M., Wiśniewska–Goćłowska B., Skrzecz A., Owczarek I., Błazej K., Haulait–Pirson M.–C., Hefter G.T., Mączyńska Z., Szafranski A., Young C.L.**
IUPAC-NIST Solubility Data Series, Hydrocarbons with Water and Seawater-Revised and Updated, Part 3. C₆H₈ - C₆H₁₂ Hydrocarbons with Water and Heavy Water.
J. Phys. Chem. Ref. Data, **2**, 657–708 (2005).
- 65. Mączyński A., Shaw D.G., Góral M., Wiśniewska–Goćłowska B., Skrzecz A., Owczarek I., Błazej K., Haulait–Pirson M.–C., Hefter G.T., Kapuku F., Mączyńska Z., Szafranski A., Young C.L.**
IUPAC-NIST Solubility Data Series, Hydrocarbons with Water and Seawater-Revised and Updated, Part 5. C₇ Hydrocarbons with Water and Heavy Water.
J. Phys. Chem. Ref. Data, **3**, 1399–1488 (2005).
- 66. Michalski J., Tacikowski J., Wach P., Łunarska E., Baum H.**
Formirovanie odnofaznogo sloâ γ -nitrida pri kontroliruemom azotirovanii w gazovoj srede (in russ.).
Metallovedene i termičeskaâ obrabotka metallov, **11**, 35-38 (2005).
- 67. Narojczyk J., Werner Z., Piekoszewski J., Szymczyk W.**
Effects of nitrogen implantation on lifetime of cutting tools made of SK5M tool steel.
Vacuum, **78**, 229-233 (2005).
- 68. Nikiforow K., Ćwiek J., Łunarska E.**
Hydrogen charging of nitrided steel in acid solution.
Ochrona przed Korozją, **48**, 213-216 (2005).
- 69. Nykyforcyn H., Łunarska E., Kyryliv O., Bassarab A.**
Umocnienie powierzchniowe stopów tytanu poprzez mechaniczno-impulsową obróbkę.
Proc. of the VIII Polish Conference „Tytan i jego stopy”, Warsaw-Serock, 2005, eds. T.Wierzchoń, J.R.Sobiecki.
PW, Warsaw, Poland, 253-260, 2005.
- 70. Orosz G.T., Gergely G., Gurban S., Menyhard M., Jabłoński A.**
Inelastic mean free path data for Si corrected for surface excitation.
Microsc. Microanal., **11**, 581-585 (2005).

- 71. Owczarek E., Zakroczymski T.**
Pułapkowanie wodoru w stali ferrytyczno-austenitycznej.
Ochrona przed Korozją, **11s/A**, 209-212 (2005).
- 72. Pavluch J., Zommer L., Polyak Y., Pekárek Z., Jabłoński A., Lesiak B., Hrnčíř T., Nehasil V.**
Experimental and model study of the Rh/Al system by means of EPES.
Surf. Interface Anal., **37**, 998-1005 (2005).
- 73. Piekoszewski J., Kempinski W., Andrzejewski B., Trybuła Z., Piekara-Sady L., Kaszyński J., Stankowski J., Werner Z., Richter E., Prokert F., Stanisławski J., Barlak M.**
Superconductivity of MgB₂ thin films prepared by ion implantation and pulsed plasma treatment.
Vacuum, **78**, 123-129 (2005).
- 74. Piekoszewski J., Kempinski W., Stankowski J., Prokert F., Richter E., Stanisławski J., Werner Z., Szymczyk W.**
Ion implantation and transient melting: a new approach to formation of superconducting MgB₂ phases.
Acta Phys. Pol. A, **106**, 861-868 (2004).
- 75. Pisarek M., Janik-Czachor M., Molnar A., Hughes K.**
Catalytic activity of Cu-based amorphous alloy ribbons modified by cathodic hydrogen charging.
Appl. Catal. A General, **283**, 177-184 (2005).
- 76. Pisarek M., Janik-Czachor M., Molnar A., Rac B.**
Cathodic hydrogen charging as a tool to activate Cu-Ti amorphous alloy catalysts.
Electrochim. Acta, **50**, 5111-5117 (2005).
- 77. Powell C.J., Jabłoński A., Salvat F.**
NIST Databases with electron elastic-scattering cross sections, inelastic mean free paths, and effective attenuation lengths.
Surf. Interface Anal., **37**, 1068–1071 (2005).

- 78. Powell C.J., Jabłoński A., Salvat F., Tanuma S., Penn D.R.**
New developments in data for Auger electron spectroscopy and X-ray photoelectron spectroscopy.
J. Surf. Anal., **12**, 88–96 (2005).
- 79. Powell C.J., Jabłoński A., Werner W.S.M., Smekal W.**
Characterization of thin films on the nanometer scale by Auger electron spectroscopy and X-ray photoelectron spectroscopy
Applied Surf. Sci., **239**, 470-480 (2005), Corrigendum: *Appl. Surface Sci.* **242**, 219 (2005).
- 80. Ryumshyna T., Łunarska E., Chernyayeva O.**
Wlijanie katodnoj polarizacii na mechaniczeskie i transportnye swojstwa metalliczeskich membran.
Vestnik Nac. Techn. Universit. KhPI, **16**, 134-137 (2005).
- 81. Sadkowski A.**
Unusual electrochemical immittance spectra with negative resistance and their validation by Kramers-Kronig transformation.
Solid State Ionics, **176**, 1987-1996 (2005).
- 82. Salvat F., Jabłoński A., Powell C.J.**
ELSEPA - Dirac partial-wave calculation of elastic scattering of electrons and positrons by atoms, positive ions and molecules.
Comput. Phys. Commun., **165**, 157-190 (2005).
- 83. Shaw D.G., Mączyński A., Góral M., Wiśniewska–Gocłowska B., Skrzecz A., Owczarek I., Błazej K., Haulait–Pirson M.–C., Hefter G.T., Mączyńska Z., Szafrąński A.**
IUPAC-NIST Solubility Data Series, Hydrocarbons with Water and Seawater-Revised and Updated, Part 6. C₈H₈ - C₈H₁₀ Hydrocarbons with Water.
J. Phys. Chem. Ref. Data, **3**, 1489–1553 (2005).
- 84. Shaw D.G., Mączyński A., Góral M., Wiśniewska–Gocłowska B., Skrzecz A., Owczarek I., Błazej K., Haulait–Pirson M.–C., Hefter G.T., Kapuku F., Mączyńska Z., Szafrąński A.**
IUPAC-NIST Solubility Data Series, Hydrocarbons with Water and Seawater-Revised and Updated, Part 7. C₈H₁₂ - C₈H₁₈ Hydrocarbons with Water.
J. Phys. Chem. Ref. Data, **4**, 2261–2298 (2005).

- 85. Shaw D.G., Mączyński A., Góral M., Wiśniewska–Goćłowska B., Skrzecz A., Owczarek I., Błazej K., Haulait–Pirson M.–C., Hefter G.T., Kapuku F., Mączyńska Z., Szafrąński A.,**
IUPAC-NIST Solubility Data Series, Hydrocarbons with Water and Seawater-Revised and Updated, Part 8. C₉ Hydrocarbons with Water. *J. Phys. Chem. Ref. Data*, **4**, 2299–2345 (2005).
- 86. Słoma J., Tacikowski M., Łunarska E., Wierzchoń T.**
Struktura i właściwości dyfuzyjnych warstw kompozytowych na bazie aluminidków niklu, wytwarzanych na stopach niklu w procesach dwustopniowych.
Inżynieria Materiałowa, **22**, 288-290 (2005).
- 87. Stabryła J., Łunarska E., Starczewski L.**
Wpływ agresywnego środowiska gleby na zużycie narzędzi rolniczych.
Tribologia, **16**, 327-339 (2005).
- 88. Werner Z., Jaskiewicz A., Pisarek M., Janik-Czachor M., Barlak M.**
AES and RBS characterization of anodic oxide films on Al-Ta amorphous alloys.
Zeitschrift für Physikalische Chemie, **219**, 1461-1479 (2005).
- 89. Wolarek Z., Zakroczyński T.**
The effect of nitrogen on hydrogen transport in iron.
Vestnik Nac. Techn. Universit. "KhPI", **16**, 31-35 (2005).
- 90. Wolarek Z., Zakroczyński T.**
The effect of plasma nitriding on the mobility of hydrogen in iron.
Inżynieria Powierzchni, **2A**, 195-199 (2005).
- 91. Zaborski S., Łunarska E.**
Electroabrasive grinding of titanium alloy at zero-charge potential.
Mater. Sci., **40**, 684-688 (2004).
- 92. Zaborski S., Łunarska E.**
SEM evaluation of the topography of anisotropic surfaces.
Mater. Sci., **37**, 777-781 (2001).

- 93. Zakroczymski T.**
Characterization of hydrogen transport in a two-phase alloy.
Vestnik Nac. Techn. Universit. "KhPI", **15**, 19-22 (2005).
- 94. Zakroczymski T.**
Evaluation of hydrogen transport and solubility in a two-phase alloy
by electrochemical permeation technique.
Inżynieria Powierzchni, **2A**, 151-157 (2005).
- 95. Zakroczymski T.**
Metody zapobiegania absorpcji wodoru przez metale.
Ochrona przed Korozją, **47**, 90-93 (2005).
- 96. Zakroczymski T.**
Prevention of hydrogen absorption by metals. – Environmental
aspects.
Ochrona przed Korozją, **11s/A**, 201-204 (2005).
- 97. Zakroczymski T., Glowacka A., Swiatnicki W.**
Effect of hydrogen concentration on the embrittlement of a duplex
stainless steel.
Corros. Sci., **47**, 1403-1414 (2005).
- 98. Zemek J., Gedeon O., Lesiak B., Jóźwik A.**
Electron irradiated potassium-silicate glass surfaces investigated by
XPS.
J. Non-Cryst. Solids, **351**, 1665–1674 (2005).
- 99. Zemek J., Potmesil J., Vanecek M., Lesiak B., Jabłoński A.**
Inelastic mean free path of electrons at nanocrystalline diamond
surfaces.
Appl. Phys. Lett., **87**, 262114 (2005).
- 100. Zieliński A., Łunarska E., Michalak P., Serbinski W.**
Strength deterioration of 25H2MF and 34HNM steels used in ship
engines: hydrogen factor.
Mater. Sci., **40**, 822-830 (2004).

101. Ziomek-Moroz M., Flis J.

Susceptibility of carbon steel to stress corrosion cracking in sodium hydroxide.

Proc. of 2005 ASME/JSME Pressure Vessels and Piping Conference – Stress Corrosion Cracking Symposium, Denver, CO, USA, 2005.

ASME, New York, NY, USA, PVP2005-71783, 1-4 (2005).

**PAPERS IN PRESS IN SCIENTIFIC AND PROCEEDINGS
OF SCIENTIFIC CONFERENCES**

1. Flis J., Kanoza M.

Electrochemical and surface analytical study of vinyl-triethoxy silane films on iron after exposure to air.

Electrochim. Acta,

2. Flis J., Kuczyńska-Wydorska M., Flis-Kabulska I.

The effect of molybdenum on corrosion of low-temperature nitrided stainless steels in sulphate-chloride solution.

J. Solid State Electrochem.,

3. Flis-Kabulska I.

Electrochemical deposition of cobalt on gold studied with STM/AFM.

J. Appl. Electrochem.,

4. Gergely G., Menyhard M., Orosz G.T., Lesiak B., Kosiński A., Jabłoński A., Nowakowski R.¹, Tóth J., Varga D.

Surface excitation correction of the inelastic mean free path in selected polymers.

Appl. Surf. Sci.,

5. Gergely G., Tóth J., Menyhard M., Varga D., Gurban S., Sulyok A., Kosiński A., Lesiak B., Jabłoński A., Nowakowski R.²

Determining of the surface excitation correction using the EPES method in selected conducting polymers.

J. Electron Spectrosc. Rel. Phenom.,

¹ Department IV

² Department IV

- 6. Jabłoński A., Tanuma S., Powell C.J.**
New universal expression for the electron stopping power for energies between 200 eV and 30 keV.
Surf. Interface Anal.,
- 7. Janik-Czachor M., Pisarek M., Molnar A.**
Activation of Cu-based amorphous alloys ribbons for catalytic applications.
Am. Electrochem. Soc. Trans.,
- 8. Krawczyk M., Zommer L., Kosiński A., Sobczak J.W., Jabłoński A.**
Measured electron IMFPs for SiC.
Surf. Interface Anal.,
- 9. Lesiak B., Biliński A., Józwick A.**
Application of the line shape analysis to the XPS/XAES spectra for investigating segregation of Au in AuNi alloys.
Acta Phys. Polonica,
- 10. Lesiak B., Józwick A.**
Application of the fuzzy pattern recognition method in quantitative analysis by electron spectroscopies.
Prace Naukowe. Elektronika, Politechnika Warszawska,
- 11. Lesiak B., Zemek J., Gedeon O., Józwick A.**
Electron irradiated sodium-potassium-aluminium silicate glass surfaces investigated by XPS.
Surf. Interface Anal.,
- 12. Lesiak B., Kosiński A., Jabłoński A., Sulyok A., Gergely G., Tóth J., Varga D.**
Influence of recoil effect and surface excitations on the inelastic mean free paths of electrons in polymers.
Acta Physica Polonica,
- 13. Lesiak B., Zemek J., Jiricek P.**
Determination of the inelastic mean free paths (IMFPs) in Ti by elastic peak electron spectroscopy (EPES): effect of impurities and surface excitations.
Appl. Surf. Sci.,

- 14. Lesiak B., Zemek J., Jiricek P., Jóźwik A.**
Investigation of CoPd alloys by XPS and EPES using the pattern recognition method.
J. Alloy Compds.,
- 15. Lesiak B., Zemek J., Jiricek P., Jóźwik A.**
Studies of AuNi alloys by electron spectroscopies with the aid of the line shape analysis by the pattern recognition method.
Surf. Interface Anal.,
- 16. Shaw D.G., Mączyński A., Góral M., Wiśniewska–Gocłowska B., Skrzecz A., Owczarek I., Błazej K., Haulait–Pirson M.–C., Hefter G.T., Kapuku F., Mączyńska Z., Szafranski A.**
IUPAC-NIST Solubility Data Series, Hydrocarbons with Water and Seawater-Revised and Updated, Part 9. C₁₀ Hydrocarbons with Water.
J. Phys. Chem. Ref. Data,
- 17. Shaw D.G., Mączyński A., Góral M., Wiśniewska–Gocłowska B., Skrzecz A., Owczarek I., Błazej K., Haulait–Pirson M.–C., Hefter G.T., Kapuku F., Mączyńska Z., Szafranski A.**
IUPAC-NIST Solubility Data Series, Hydrocarbons with Water and Seawater-Revised and Updated, Part 10. C₁₁ and C₁₂ Hydrocarbons with Water.
J. Phys. Chem. Ref. Data,
- 18. Shaw D.G., Mączyński A., Góral M., Wiśniewska–Gocłowska B., Skrzecz A., Owczarek I., Błazej K., Haulait–Pirson M.–C., Hefter G.T., Kapuku F., Mączyńska Z., Szafranski A.**
IUPAC-NIST Solubility Data Series, Hydrocarbons with Water and Seawater-Revised and Updated, Part 11. C₁₃ - C₃₆ Hydrocarbons with Water.
J. Phys. Chem. Ref. Data,
- 19. Shaw D.G., Mączyński A., Hefter G.T., Kleinschmidt M., Mackay D., Meyers P.A., Miyamoto H., Shiu W.Y.**
IUPAC-NIST Solubility Data Series, Hydrocarbons with Water and Seawater- Revised and Updated, Part 12. C₅– C₂₆ Hydrocarbons with Seawater.
J. Phys. Chem. Ref. Data,

20. **Tabakova T., Boccuzzi F., Manzoli M., Sobczak J.W., Idakiev V., Andreeva D.**
A comparative study of nanosized I B/ceria catalysts for low-temperature water-gas shift reaction.
Appl. Catal. B,
21. **Wolarek Z., Zakroczymski T.**
Hydrogen absorption in plasma nitrated iron.
Acta Materialia,
22. **Zakroczymski T.**
Adaptation of the electrochemical permeation technique for studying entry, transport and trapping of hydrogen in metals.
Electrochim. Acta,
23. **Zemek J., Jiricek P., Werner W.S.M., Lesiak B., Jabłoński A.**
Angular-resolved elastic peak electron spectroscopy. Experiment and Monte Carlo calculations.
Surf. Interface Anal.,
24. **Zommer L., Jabłoński A.**
EPES sampling depth paradox for overlayer/substrate system.
J. Elect. Spectrosc. Rel. Phenomen.,

LECTURES AND COMMUNICATIONS PRESENTED AT SCIENTIFIC CONFERENCES

1. **Baszkiewicz J., Krupa D., Kozubowski J.A., Rajchel B., Barcz A., Sobczak J.W., Biliński A.**
Wpływ implantacji jonów sodu na odporność korozyjną tytanu i stopu tytanu Ti6Al4V.
VIII Ogólnopolska Konferencja: Tytan i jego stopy, Warsaw-Serock, Poland, 2005.
2. **Baszkiewicz J., Krupa D., Kozubowski J.A., Rajchel B., Barcz A., Sobczak J.W., Biliński A.**
Effect of sodium-ion implantation on the corrosion resistance of titanium and Ti6Al4V alloy.
16th International Corrosion Congress, Beijing, China, 2005.

3. **Baszkiewicz J., Krupa D., Kozubowski J.A., Rajchel B., Barcz A., Sobczak J.W., Biliński A.**
Effect of sodium-ion implantation on the corrosion resistance of Co-Cr-Mo alloy (Vitalium).
The European Corrosion Congress EUROCORR 2005, Lisbon, Portugal, 2005.
4. **Baszkiewicz J., Krupa D., Mizera J., Barcz A., Sobczak J.W., Biliński A.**
Effect of alkali-and heat treatment on the corrosion resistance of titanium.
The European Corrosion Congress EUROCORR 2005, Lisbon, Portugal, 2005.
5. **Ćwiek J., Nikiforow K., Łunarska E.**
Hydrogen charging of nitrated steel in amid solution.
XI Ogólnopolskie Sympozjum Naukowo-Techniczne „Nowe osiągnięcia w badaniach i inżynierii korozyjnej”, Szczyrk, Poland, 2005.
6. **Ćwil M., Konarski P., Pajak M., Pieniek T., Kosiński A.**
RuO₂/SiO₂/Si and SiO₂/porous Si/Si interfaces analysed by SIMS.
The 15th International Conference on Secondary Ion Mass Spectrometry (SIMS XV), Manchester, UK, 2005.
7. **Domżałicki P., Łunarska E.**
Effect of bacteria on hydrogen uptake by low alloy steels cathodically protected in sea water.
XI Ogólnopolskie Sympozjum Naukowo-Techniczne „Nowe osiągnięcia w badaniach i inżynierii korozyjnej”, Szczyrk, Poland, 2005.
8. **Drelinkiewicz A., Waksmundzka A., Makowski W., Sobczak J.W., Stejskal J.**
Pd-polyaniline film - SiO₂, preparation, physicochemical and catalytic properties.
2nd International Workshop on polymer/metal nanocomposites, Geesthacht, Germany, 2005.

- 9. Fernandez-Varea J.M., Salvat F., Jabłoński A., Powell C.J.**
The effect of inelastic absorption on the elastic scattering of electrons in solids.
European Conference on Applications of Surface and Interface Analysis (ECASIA'05), Vienna, Austria, 2005.
- 10. Flis J.**
Azotowanie plazmowe i jego wpływ na odporność korozyjną stali nierdzewnych.
XIII Konferencja „Antykorozyja”, Ustroń-Jaszowiec, Poland, 2005
(*invited lecture*).
- 11. Flis J.**
Effect of phosphorus on corrosion and passivation of iron.
IV Ukrainian Electrochemical Congress, Alushta, Ukraine, 2005
(*invited lecture*).
- 12. Flis J.**
Problems with determination of porosity of phosphate coatings.
International Conference „Corrosion 2005, Science and Economy – New Challenges”, Warsaw, Poland, 2005.
- 13. Flis J., Kanoza M.**
Corrosion resistance of vinyl-triethoxy silane films on iron after exposure to air and to phosphate solution.
International Conference „Corrosion 2005, Science and Economy – New Challenges”, Warsaw, Poland, 2005.
- 14. Flis J., Zakroczyński T., Mańkowski J.**
Surface analysis of corrosion products on various depths of nitrated stainless steels.
XI Ogólnopolskie Sympozjum „Nowe osiągnięcia w badaniach i inżynierii korozyjnej”, Szczyrk, Poland, 2005.
- 15. Flis-Kabulska I.**
Electrodeposition of cobalt on gold studied with cyclic voltammetry and scanning probe microscopy.
IV Ukrainian Electrochemical Congress, Alushta, Ukraine, 2005.

- 16. Gajek A., Zakroczymski T.**
Hydrogen evolution reaction on and hydrogen entry into iron during long-lasting cathodic polarization in an aqueous solution.
International Conference „Corrosion 2005, Science and Economy – New Challenges”, Warsaw, Poland, 2005.
- 17. Gajek A., Zakroczymski T.**
The influence of long-lasting cathodic polarization of iron on hydrogen evolution and hydrogen entry.
IV Ukrainian Electrochemical Congress, Alushta, Ukraine, 2005.
- 18. Gergely G., Gurban S., Menyhard M., Sulyok A., Toth J., Varga D., Jabłoński A.**
Experimental determination of the Inelastic Mean Free Path (IMFP) of electrons in SiO₂ applying surface excitation correction.
European Conference on Applications of Surface and Interface Analysis (ECASIA'05), Vienna, Austria, 2005.
- 19. Gibała U., Zakroczymski T.**
Effect of strain on hydrogen absorption In iron.
XI Ogólnopolskie Sympozjum „Nowe osiągnięcia w badaniach i inżynierii korozyjnej”, Szczyrk, Poland, 2005.
- 20. Góral M.,**
Mutual solubility of ethers and ketones with water.
IUPAC Subcommittee on Solubility and Equilibrium Data, Portorož, Slovenia, 2005.
- 21. Góral M., Wiśniewska-Gocłowska B.**
Prediction of LLE in water-alcohol systems.
21th European Symposium on Applied Thermodynamics, ESAT 2005, Jurata, Poland, 2005.
- 22. Hofman M., Wachowski L., Sobczak J.W.**
Badania metodą XPS materiałów organicznych modyfikowanych azotem, stosowanych jako nośniki katalizatorów.
XLVIII Zjazd PTChem i SITPChem, Poznań, Poland, 2005.

- 23. Ilieva L., Sobczak J.W., Manzoli M., Su B.-L., Andreeva D.**
Reduction behaviour of gold catalyst supported on mesoporous titania and zirconia.
VII European Congress on Catalysis, Sofia, Bulgaria, 2005.
- 24. Jabłoński A.**
Elastic and inelastic electron backscattering from surfaces.
10th Symposium on Surface Physics, Prague, Czech Republic, 2005,
(*invited lecture*).
- 25. Jabłoński A.**
Role of the emission depth distribution function in quantification of electron spectroscopies.
European Conference on Applications of Surface and Interface Analysis (ECASIA'05), Vienna, Austria, 2005.
- 26. Jabłoński A.**
Sources of the elastic scattering cross-sections for electrons and positrons in a wide energy range.
Warsaw Workshop on Standardization and Quantification of Surface Science Techniques, Warsaw, Poland, 2005.
- 27. Jabłoński A., Salvat F.**
Sources of elastic scattering cross-sections for electrons and positrons over a wide energy range.
9th European Workshop on Modern Developments and Applications in Microbeam Analysis, Florence, Italy, 2005.
- 28. Jabłoński A., Salvat F., Powell C.J.**
Evaluation of elastic-scattering cross-sections for electrons and positrons over a wide energy range.
European Conference on Applications of Surface and Interface Analysis (ECASIA'05), Vienna, Austria, 2005.
- 29. Jabłoński A., Tanuma S., Powell C.J.**
New universal expressions for the stopping power over a wide energy range.
European Conference on Applications of Surface and Interface Analysis (ECASIA'05), Vienna, Austria, 2005.

- 30. Janik-Czachor M.**
Amorphous alloys as model systems to study effect of refractory metal alloying elements on passivity.
8th International Symposium on Electrochemical/Chemical Reactivity of Metastable Materials, Szeged, Hungary, 2005 (*invited lecture*).
- 31. Janik-Czachor M., Pisarek M., Gebert A., Molnar A., Kędzierzawski P., Rac B.**
Modification of catalytic activity of Cu-based amorphous alloys by cathodic hydrogen charging.
XVII International School on Physics and Chemistry of Condensed Matter and V International Symposium on Physics in Materials Science, Materials in Transition, Białowieża, Poland, 2005.
- 32. Janik-Czachor M., Pisarek M., Molnar A., Rac B.**
Cathodic hydrogen charging as a tool to activate Cu-Ti amorphous alloy catalysts.
208th ECS Meeting, Los Angeles, California, USA, 2005.
- 33. Krawczyk M.**
Adsorption of ethene and its co-adsorption with hydrogen on Pd-Co alloy surfaces.
VII European Congress on Catalysis, Sofia, Bulgaria, 2005.
- 34. Krawczyk M., Kosiński A.**
Electron IMFPs in bulk $Cd_{1-x}Mn_xTe$ crystals: predicted and measured IMFPs.
Warsaw Workshop on Standardization and Quantification of Surface Science Techniques, Warsaw, Poland, 2005.
- 35. Krawczyk M., Kosiński A., Jabłoński A.**
Surface and sub-surface region properties of $Cd_{1-x}Mn_xTe$ crystals probed by AES, XPS, SAM and EPES analyses.
European Conference on Applications of Surface and Interface Analysis (ECASIA'05), Vienna, Austria, 2005.
- 36. Krawczyk M., Sobczak J.W.**
The XPS characterization of the Pd-Au interface in bimetallic alloy systems.
VII European Congress on Catalysis, Sofia, Bulgaria, 2005.

- 37. Krawczyk M., Sobczak J.W.**
XPS studies on the Pd-M (M=Ag, Au, Pt) interface in catalytically important bimetallic alloys.
European Conference on Applications of Surface and Interface Analysis (ECASIA'05), Vienna, Austria, 2005.
- 38. Krawczyk M., Sobczak J.W., Kosiński A.**
On the metal-metal interaction in bimetallic Pd-containing alloys of catalytic importance.
XXXVII Ogólnopolskie Kolokwium Katalityczne, Kraków, Poland, 2005.
- 39. Krawczyk M., Zommer L., Kosiński A., Sobczak J.W., Jabłoński A.**
Calculated and measured electron IMFPs for SiC.
European Conference on Applications of Surface and Interface Analysis (ECASIA'05), Vienna, Austria, 2005.
- 40. Krupa D., Baszkiewicz J., Kozubowski J.A., Mizera J., Sobczak J.W., Biliński A., Smolik J., Słomka Z.**
Effect of anodic oxidation on the corrosion resistance of the Ti6Al4V alloy.
16th International Corrosion Congress, Beijing, China, 2005.
- 41. Kuczyńska M., Flis J.**
Electrochemical impedance of nitrated stainless steels in sulphate solutions.
IV Ukrainian Electrochemical Congress, Alushta, Ukraine, 2005.
- 42. Kuczyńska M., Flis J.**
Pitting corrosion behaviour of stainless steels after low-temperature nitriding.
International Conference „Corrosion 2005, Science and Economy – New Challenges”, Warsaw, Poland, 2005.
- 43. Kuczyńska-Wydorska M., Flis J.**
Effect of nitrogen and molybdenum on passivation of stainless steels in acidic sulphate solutions.
XI Ogólnopolskie Sympozjum „Nowe osiągnięcia w badaniach i inżynierii korozyjnej”, Szczyrk, Poland, 2005.

- 44. Lesiak B.,**
Application of the fuzzy pattern recognition method for quantitative electron spectroscopies.
Warsaw Workshop on Standardization and Quantification of Surface Science Techniques, Warsaw, Poland, 2005.
- 45. Lesiak B., Jabłoński A., Kosiński A., Gergely G., Menyhard M., Sulyok A., Tóth J., Varga D.**
Experimental determination of the inelastic mean free path (IMFP) of polyaniline and polyacetylene polymer samples applying elastic peak electron spectroscopy (EPES) and the NIST SRD64 version 3.1 database.
European Conference on Applications of Surface Interface Analysis, ECASIA 2005, Vienna, Austria, 2005.
- 46. Lesiak B., Jabłoński A., Zemek J., Jiricek P., Jóźwik A.**
Application of electron spectroscopes (XPS/XAES and EPES) and the pattern recognition method for investigating the surface segregation in binary alloys.
Xth Symposium on Surface Physics, Prague, Czech Republic, 2005.
- 47. Lesiak B., Jóźwik A.**
Zastosowanie metody rozmytej rozpoznawania obrazów w analizach ilościowych za pomocą spektroskopii elektronowych.
VII Krajowa Konferencja Techniki Próżni, Cezdzya k/Kielc, Poland, 2005.
- 48. Lesiak B., Jóźwik A., Zemek J., Gedeon O.**
Pattern recognition analysis of photoelectron spectra from electron irradiated alkali silicate glass surfaces.
European Conference on Applications of Surface Interface Analysis, ECASIA 2005, Vienna, Austria, 2005.
- 49. Łunarska E.**
Badania degradacji wodorowej materiałów instalacji energetycznych i chemicznych Polski i Ukrainy w celu opracowania metod jej zapobiegania i oceny czasu pracy.
Seminarium "Polsko-ukraińska współpraca w nauce i technice", Kraków, Poland, 2005.

- 50. Łunarska E.**
Pochłanianie elektrochemicznego wodoru przez fazy I stopy układu Ti-Al.
VIII Ogólnopolska Konferencja „Tytan i jego stopy”,
Warszawa/Serock, Poland, 2005.
- 51. Łunarska E.**
Scientific connection and cooperation between Physico-mechanical Institute of NASU and Institute of Physical Chemistry PAS in environment degradation problems.
Symposium “Physico-chemical mechanics of materials”, dedicated to 95th anniversary of prof. G.Karpenko, Lviv, Ukraine, 2005 (*invited lecture*).
- 52. Łunarska E., Nikiforov K., Wierzchoń T., Ossowski M.**
Effect of plasma treated Ti-Al surface layers on corrosion behavior of Ti6Al2Cr2Mo alloy.
IV Ukrainian Electrochemical Congress, Alushta, Ukraine, 2005.
- 53. Łunarska E., Nikiforow K.**
Topography of environmental degradation of nitrated layers.
XI Ogólnopolskie Sympozjum Naukowo-Techniczne „Nowe osiągnięcia w badaniach i inżynierii korozyjnej”, Szczyrk, Poland, 2005.
- 54. Łunarska E., Nikiforow K., Nykyforczyn H., Wierzchoń T.**
Effect of surface modification on the hydrogen absorption by Ti-6%Al-2%Cr-2%Mo alloy.
Eurocorr 2005, Lisbon, Portugal, 2005.
- 55. Łunarska E., Nikiforow K., Pyrża J.**
Monitoring of the hydrogen charging of the industrial installations.
International Conference „Corrosion -2005”, Warsaw, Poland, 2005.
- 56. Łunarska E., Nikiforow K., Stabryła J., Starczewski L.**
Effect of the boron alloying and the laser treatment on corrosion and hydrogen charging of low alloy steel.
International Conference „Corrosion -2005”, Warsaw, Poland, 2005.

- 57. Mańkowski J.**
A comparison of effects of plasma and conventional gas nitriding on anodic behavior of stainless steel.
IV Ukrainian Electrochemical Congress, Alushta, Ukraine, 2005.
- 58. Mańkowski J.**
Effect of the cooling rate after plasma nitriding on the corrosion resistance of nitrided stainless steels.
International Conference „Corrosion 2005, Science and Economy – New Challenges”, Warsaw, Poland, 2005.
- 59. Mańkowski J., Zych A.**
Wpływ azotowania plazmowego stali 38HMJ na jej anodowe zachowanie w roztworze siarczanowym i chlorkowo-siarczanowym.
XI Ogólnopolskie Sympozjum „Nowe osiągnięcia w badaniach i inżynierii korozyjnej”, Szczyrk, Poland, 2005.
- 60. Nykyforcyn H., Łunarska E., Kyryliv O., Bassarab A.**
Umocnienie powierzchniowe stopów tytanu poprzez mechaniczno-impulsową obróbkę.
VIII Ogólnopolska Konferencja „Tytan i jego stopy”, Warsaw/Serock, Poland, 2005.
- 61. Oracz P., Bok A., Góral M.**
Recommended vapor-liquid equilibrium data for binary alkanols with alkene or alkyne systems.
21th European Symposium on Applied Thermodynamics, ESAT 2005, Jurata, Poland, 2005.
- 62. Pavluch J., Zommer L., Polyak Y., Pekárek Z., Jabłoński A., Lesiak B., Hrnčíř T., Nehasil V.**
Experimental and model study of the Rh/Al system by means of EPES.
Workshop on Modelling Electron Transport for Applications in Electron and X-ray Analysis and Metrology, Gaithersburg, USA, 2005.

- 63. Piekoszewski J., Kempniński W., Andrzejewski B., Trybuła Z., Kaszyński J., Stankowski J., Stanisławski J., Barlak M., Konarski P., Werner Z.**
Formation of superconducting regions of MgB₂ by implantation of magnesium ions into boron substrate followed by intense pulsed plasma treatment.
14th International Conference on Surface Modification of Materials by Ion Beams, Surface and Coating Technology, Kusadasi, Turkey, 2005.
- 64. Pisarek M., Janik-Czachor M.**
High resolution Auger microanalytical characterization of Cu-Hf and Cu-Ti catalysts.
8th International Symposium on Electrochemical/Chemical Reactivity of Metastable Materials, Szeged, Hungary, 2005.
- 65. Pisarek M., Janik-Czachor M., Molnar A., Rac B.**
Cathodic hydrogen charging as a tool to activate Cu-Ti amorphous alloy catalysts.
XVII International School on Physics and Chemistry of Condensed Matter and V International Symposium on Physics in Materials Science, Materials in Transition, Białowieża, Poland, 2005.
- 66. Pisarek M., Janik-Czachor M., Molnar A., Rac B.**
Cathodic hydrogen charging as a tool to activate Cu-Ti amorphous alloy catalysts.
8th International Symposium on Electrochemical/Chemical Reactivity of Metastable Materials, Szeged, Hungary, 2005.
- 67. Rok Ł., Mróz S., Zych E., Janik-Czachor M.**
The short range atomic order in the surface layer of Al-W metallic glass investigated using Directional Elastic Peak Electron Spectroscopy.
International Workshop on Surface Physics, Polanica Zdrój, Poland, 2005.
- 68. Ryumshyna T., Łunarska E., Chernyayeva O.**
Wlijanie katodnoy polarizacii na mechaniczeskie i transportnye swojstwa metalliczeskich membran.
IV Ukrainskij Zjazd Elektrochemii, Charkiv – Alushta, Ukraine, 2005.

- 69. Sadkowski A.**
Problems of stability and electrochemical phase transitions at metal-electrolyte interfaces.
XVII International School on Physics and Chemistry of Condensed Matter and V International Symposium on Physics in Materials Science, Materials in Transition, Białowieża, Poland, 2005 (*invited lecture*).
- 70. Sobczak J.W., Cieślak M., Raczko J.**
Katalizator palladowy do stereoselektywnego uwodorniania w syntezie feromonów.
XXXVII Ogólnopolskie Kolokwium Katalityczne, Kraków, Poland, 2005.
- 71. Sobczak J.W., Cieślak M., Raczko J.**
Palladium catalyst for stereoselective hydrogenation in syntheses of insect sex pheromones.
VII European Congress on Catalysis, Sofia, Bulgaria, 2005.
- 72. Sobczak J.W., Ilieva L., Manzoli M., Su B.-L., Andreeva D.**
Redukcja katalizatorów Au na mezoporowatych TiO₂ i ZrO₂. XPS – „in situ”.
XXXVII Ogólnopolskie Kolokwium Katalityczne, Kraków, Poland, 2005.
- 73. Spivak L., Łunarska E.**
Mechanicheskoye posledejstwie pri nasyszczenii aluminija wodorodom.
XLIV Międzynarodowa Konferencja „Aktualne problemy wytrzymałości”, Vologda, Russia, 2005.
- 74. Stonkus V., Leite L., Edolfa K., Fleisher M., Shopska M., Shtereva I., Spasov L., Kadinov G., Sobczak J.W.**
Promoting effect of palladium in Co-Pd-SiO₂ catalysts for 2,3-dihydrofuran synthesis.
7th International Symposium on Catalysis Applied to Fine Chemicals (CAFC) Bingen/Maiz, Germany, 2005.

- 75. Waksmundzka-Góra A., Drelinkiewicz A., Makowski M., Sobczak J.W.**
Electroactive polymers-supported Pd catalysts for the hydrogenation of carbonyl compounds.
VII European Congress on Catalysis, Sofia, Bulgaria, 2005.
- 76. Werner Z., Jaskiewicz A., Pisarek M., Janik-Czachor M., Barlak M.**
AES and RBS characterization of anodic oxide films on Al-Ta amorphous alloys.
XVII International School on Physics and Chemistry of Condensed Matter and V International Symposium on Physics in Materials Science, Materials in Transition, Białowieża, Poland, 2005.
8th International Symposium on Electrochemical/Chemical Reactivity of Metastable Materials, Szeged, Hungary, 2005.
- 77. Werner Z., Szymczyk W.**
Ion implantation as a method of forming nano-structured layers.
XVII International School on Physics and Chemistry of Condensed Matter and V International Symposium on Physics in Materials Science, Materials in Transition, Białowieża, Poland, 2005.
- 78. Wolarek Z. Zakroczymski T.**
The effect of plasma nitriding on the mobility of hydrogen in iron.
International Conference „Corrosion 2005, Science and Economy – New Challenges”, Warsaw, Poland, 2005.
- 79. Wolarek Z., Zakroczymski T.**
The effect of nitrogen on hydrogen transport in iron.
IV Ukrainian Electrochemical Congress, Alushta, Ukraine, 2005.
- 80. Zakroczymski T.**
Characterization of hydrogen transport in a two-phase alloy.
IV Ukrainian Electrochemical Congress, Alushta, Ukraine, 2005
(*invited lecture*).
- 81. Zakroczymski T.**
Evaluation of hydrogen transport and solubility in a two-phase alloy by electrochemical permeation technique.
International Conference „Corrosion 2005, Science and Economy – New Challenges”, Warsaw, Poland, 2005.

- 82. Zakroczymski T.**
Metody zapobiegania absorpcji wodoru przez metale.
XIII Konferencja „Antykorozyja”, Ustroń-Jaszowiec, Poland, 2005
(*invited lecture*).
- 83. Zemek J., Jiricek P., Werner W.S.M., Lesiak B., Jabłoński A.**
Angular-resolved elastic peak electron spectroscopy. Experimental,
analytical and Monte Carlo calculations.
European Conference on Applications of Surface Interface Analysis,
ECASIA 2005, Vienna, Austria, 2005.
- 84. Ziomek-Moroz M., Flis J.**
Susceptibility of carbon steel to stress corrosion cracking in sodium
hydroxide.
ASME/JSME Pressure Vessels and Piping Conference – Stress
Corrosion Cracking Symposium, Denver CO, USA, 2005.
- 85. Zommer L.**
EPES sampling depth paradox.
Warsaw Workshop on Standardization and Quantification of Surface
Science Techniques, Warsaw, 2005.
- 86. Zommer L., Jabłoński A.**
EPES sampling depth paradox for overlayer/substrate system.
European Conference on Applications of Surface and Interface
Analysis (ECASIA '05), Vienna, Austria, 2005.

**INVITED LECTURES PRESENTED AT UNIVERSITIES AND
OTHER SCIENTIFIC CENTERS (UNPUBLISHED)**

- 1. Flis J.**
Nitriding of stainless steels for improvement of resistance to corrosion
and wear.
National Centre for Metallurgical Research (CENIM-CSIC).
Madrid, Spain, 2005.
- 2. Góral M.,**
New methods for calculation of VLE and LLE data.
University in Erlangen, Germany, 2005.

3. **Jabłoński A.**
Evaluation of elastic-scattering cross sections for electrons and positrons over a wide energy range.
Research Institute for Technical Physics and Materials Science (MFA) of the Hungarian Academy of Sciences, Budapest, Hungary, 2005.
4. **Łunarska E.**
Wpływ wodoru na metale – znane problemy i nowe możliwości.
AGH University of Science and Technology, Kraków, Poland, 2005.
5. **Mączyński A.**
Thermodynamic Data Center.
University in Erlangen, Germany, 2005.
6. **Sadkowski A.**
Charakterystyki impedancyjne niejednorodnych powierzchni elektrod stałych.
University of Wrocław, Physical Chemistry Department, Wrocław, Poland, 2005.
7. **Zakroczymski T.**
Electrochemical determination of hydrogen entry, transport, absorption and trapping in metals.
National Centre for Metallurgical Research (CENIM-CSIC).
Madrid, Spain, 2005.

DEPARTMENT VII

ELECTRODE PROCESSES

Head of the Department: doc. dr hab. Marcin Opallo

Phone: +48 22 343 33 75

MONOGRAPHS

- 1. Di Caprio D., Stafiej J., Badiali J.P.**
Field theoretical approach for ionic systems,
in „Ionic soft matter: Modern trends in theory and applications. ”NATO
Science Series II”, Vol. 206 (eds D. Henderson, M. Holovko, A.
Trokhymchuk)
Springer, Dordrecht, Netherlands, 2005, pp. 1-17.

PAPERS PUBLISHED IN SCIENTIFIC JOURNALS AND PROCEEDINGS OF SCIENTIFIC CONFERENCES

- 1. Di Caprio D., Stafiej J., Borkowska Z.**
Anomalous temperature dependence of differential capacity at
uncharged interface with Debye Hückel electrolyte: Field theoretical
approach.
J. Electroanal. Chem., **582**, 41-49 (2005).
- 2. Marken F., McKenzie K.J., Shul G., Opallo M.**
Liquid|liquid ion transfer processes at
4-(3-phenylpropyl)-pyridine|aqueous electrolyte|electrode triple phase
boundary systems supported by graphite and mesoporous TiO₂.
Farad. Discuss., **129**, 219-229 (2005).

3. **McKenzie K.J., Marken F., Opallo M.**
TiO₂ phytate films as hosts and conduits for cytochrome c electrochemistry.
Bioelectrochem., **66**, 41-47 (2005).
4. **Niedziółka J., Palys B., Nowakowski R.¹, Opallo M.**
Characterisation of gold electrodes modified with 3-methyltrimethoxysilane and (3-mercaptopropyl)trimethoxysilane sol-gel processed films.
J. Electroanal. Chem., **578**, 239-245 (2005).
5. **Niedziółka J., Roźniecka E., Stafiej J., Sirieix-Plenet J., Gaillon L., Di Caprio D., Opallo M.**
Ion transfer processes at ionic liquid based redox active drop deposited on the electrode surface.
Chem. Commun., 2954-2956 (2005).
6. **Opallo M., Sączek-Maj M., Shul G., Hayman C.M., Bulman Page P.C., Marken F.**
Microphase voltammetry of diluted and undiluted redox liquids deposited on sol-gel ceramic carbon electrodes.
Electrochim. Acta., **50**, 1711-1717 (2005).
7. **Roźniecka E., Shul G., Sirieix-Plenet J., Gaillon L., Opallo M.**
Electroactive ceramic carbon electrode modified with ionic liquid.
Electrochem. Commun., **7**, 299-304 (2005).
8. **Saunier J., Chausse A., Stafiej J., Dymitrowska M., Badiali J.P.**
Diffusion, interactions and universal behavior in a corrosion-growth model.
J. Electroanal. Chem., **582**, 267-273 (2005).
9. **Shul G., Marken F., Opallo M.**
Liquid-liquid interfacial processes at hydrophobic silica carbon composite electrodes: ion transfer at water-nitrobenzene, water-*o*-nitrophenyloctylether, and water-*o*-nitrophenylphenylether interfaces.
Electrochim. Acta., **50**, 3215-2322 (2005).

¹ Department IV

10. **Shul G., McKenzie K.J., Niedziółka J., Roźniecka E., Pałys B., Marken F., Hayman C.M., Buckley B.R., Bulman Page P.C., Opalło M.**
Characterisation of biphasic electrodes based on the liquid N,N-didodecyl-N',N'-diethylphenylenediamine redox system immobilised on porous hydrophobic silicates and immersed in aqueous media.
J. Electroanal. Chem., **582**, 202-208 (2005).
11. **Shul G., Murphy M.A., Wilcox G.D., Marken F., Opalło M.**
Effects of carbon nanofiber composited on electrode processes involving liquid|liquid interface.
J. Solid State Electrochem., **9**, 874-881 (2005).
12. **Shul G., Opalło M.**
Ion transfer across liquid-liquid interface coupled to electrochemical redox reaction at carbon paste electrodes.
Electrochem. Commun., **7**, 194-198 (2005).
13. **Stafiej J., Taleb A., Badiali J.P.**
Cellular automata approach to corrosion modeling. The peculiar role of diffusion.
Inżynieria Powierzchni, **2A**, 13-19 (2005).
14. **Żółtowski P.**
Non-traditional approach to measurement models for analysis of impedance spectra.
Solid State Ionics, **176**, 1979-1986 (2005).

PAPERS IN PRESS IN SCIENTIFIC JOURNALS

1. **Roźniecka E., Niedziółka J., Sirieix-Plenet J., Gaillon L., Marken F., Murphy M.A., Opalło M.**
Ion transfer processes at the room temperature ionic liquid|aqueous solution interface supported by a hydrophobic carbon nanofibers – silica composite film.
J. Electroanal. Chem.,

2. **Zawisza I., Rogalski J., Opallo M.**
Electrocatalytic reduction of dioxygen by redox mediator and laccase immobilised in silicate thin film.
J. Electroanal. Chem.,
3. **Żóltowski P.**
Comparison of transfer functions of transport of hydrogen in elastic metals.
Electrochim. Acta,

LECTURES AND COMMUNICATIONS PRESENTED AT SCIENTIFIC CONFERENCES

1. **Di Caprio D., Stafiej J.**
Field theoretical approach of the classical liquids. Application to ionic systems.
29th International Conference on Solution Chemistry, Portorose, Slovenia, 2005.
2. **Niedziółka J., Murphy M.A., Marken F., Opallo M.**
Electrodes modified with nanoparticles or nanofibres embedded in silicate film.
European School on Nanosciences and Nanotechnologies, Grenoble, France, 2005.
3. **Niedziółka J., Murphy M.A., Marken F., Opallo M.**
Ion-transfer electrodes based on nanofibres or nanoparticles embedded in silicate films.
1st ECHEMS Conference, Electrochemistry in Nanosciences, Venice, Italy, 2005.
4. **Niedziółka J., Roźniecka E., Shul G., Pałys B., Nowakowski R.¹, McKenzie K.J., Marken F., Opallo M.**
Electrochemical behaviour of redox liquid microdroplets deposited on silicate film based electrode.
8th Meeting on Electrode Reaction Mechanism and Interfacial Structure, Freudenstadt Lauterbad, Germany 2005.

¹ Department IV

5. **Opallo M., Niedziółka J., Roźniecka E., Sączek-Maj M., Shul G., Palys B., Nowakowski R., McKenzie K.J., Murphy M.A., Marken F.**
Electrochemical processes at silicate based electrodes modified with redox liquid.
4th Baltic Conference on Electrochemistry, Greiswald, Germany, 2005.
6. **Opallo M., Niedziółka J., Roźniecka E., Shul G., Sirieix-Plenet J., Gaillon L.**
Ion transfer across ionic liquid - water interface generated by electrochemical redox reaction.
56th International Electrochemical Society Meeting, Busan, Korea, 2005.
7. **Opallo M., Niedziółka J., Roźniecka E., Sirieix-Plenet J., Gaillon L.**
Biphasic electrochemistry of ionic liquids deposited on the electrode surface.
SMBCS Workshop, Kazimierz Dolny, Poland, 2005 (*keynote lecture*).
8. **Roźniecka E., Niedziółka J., Sirieix-Plenet J., Gaillon L., Marken F., Murphy M.A., Opallo M.**
Ion transfer electrodes based on carbon nanofibers embedded in silicate film modified with room temperature ionic liquid.
SMBCS Workshop, Kazimierz Dolny, Poland, 2005.
9. **Roźniecka E., Niedziółka J., Sirieix-Plenet J., Gaillon L., Marken F., Murphy M.A., Opallo M.**
Ion transfer across room temperature ionic liquid | aqueous solution interface at hydrophobic carbon nanofibers – silica composite film electrode.
European School on Nanosciences and Nanotechnologies, Grenoble, France, 2005.
10. **Roźniecka E., Shul G., Sirieix-Plenet J., Gaillon L. Opallo M.**
Electroactive ceramic carbon electrode impregnated with ionic liquid.
8th Meeting on Electrode Reaction Mechanism and Interfacial Structure, Freudenstadt Lauterbad, Germany, 2005.
11. **Sączek-Maj M., Opallo M.**
Carbon ceramic electrode modified with redox liquid – matrix effect.
4th Baltic Conference on Electrochemistry, Greiswald, Germany, 2005.

- 12. Shul G., Niedziółka J., Roźniecka E., Sączek-Maj M., Palys B., Marken F., Opallo M.**
Silicate based electrodes modified with a liquid acid-base complex.
4th Baltic Conference on Electrochemistry, Greiswald, Germany, 2005.
- 13. Shul G., Opallo M.**
Ion transfer across liquid-liquid interface coupled to electrochemical redox reaction at carbon paste electrode.
8th Meeting on Electrode Reaction Mechanism and Interfacial Structure, Freudenstadt Lauterbad, Germany, 2005.
- 14. Shul G., Roźniecka E., Sirieix-Plenet J., Gaillon L., Opallo M.**
Ionic liquid based carbon paste electrode.
ELECTROCHEM 2005, Newcastle upon Tyne, UK, 2005.
- 15. Stafiej J., Taleb A., Badiali J.P.**
Cellular automata approach to corrosion modeling. The peculiar role of diffusion.
Corrosion 2005, International Conference, Science and Economy, New Challenges, Warsaw, Poland, 2005.
- 16. Stafiej J., Taleb A., Badiali J.P.**
Cellular automata approach to the role of composition inhomogeneities and diffusion in the solution side of the interface with a corroding material.
29th International Conference on Solution Chemistry, Portorose, Slovenia, 2005.
- 17. Taleb A., Stafiej J., Badiali J.P.**
Étude par simulation numérique des propriétés physiques de film d'oxyde à l'interface métal-environnement corrosif.
Journées d'Electrochimie, Saint Malo, France, 2005.
- 18. Taleb A., Stafiej J., Badiali J.P.**
Numerical simulation of metal corrosion with cluster formation.
International Conference on the Simulation of Electrochemical Processes, Cadix, Spain, 2005.

- 19. Taleb A., Stafiej J., Badiali J.P.**
Simulation of Passivation Phenomena in Metal Corrosion.
The 9th International Symposium on the Passivation of Metals and Semiconductors and the Properties of Thin Oxide Layers, Paris, France, 2005.
- 20. Vautrin-UI C., Chaussé A., Stafiej J., Badiali J.P.**
Simulations numériques de la corrosion d'un métal au niveau d'un défaut ponctuel d'une couche de protection.
Journées d'Electrochimie, Saint Malo, France, 2005.
- 21. Vautrin-UI C., Taleb A., Chaussé A., Stafiej J., Badiali J.P.**
Simulations of corrosion processes with anodic and cathodic reactions separated in space.
The 9th International Symposium on the Passivation of Metals and Semiconductors and the Properties of Thin Oxide Layers, Paris, France, 2005.
- 22. Żóltowski P.**
Transport of hydrogen in elastic MH_n solids.
2nd Workshop, Center of Excellence „Portable and Emergency Energy Sources (POEMES) development”, Primorsko, Bulgaria, 2005 (*invited lecture*).

**INVITED LECTURES PRESENTED AT UNIVERSITIES
AND OTHER SCIENTIFIC CENTERS (UNPUBLISHED)**

- 1. Opallo M.**
Biphasic electrochemistry of room temperature ionic liquids.
University of Bath, Chemistry Department, Bath, United Kingdom, 2005.
- 2. Opallo M.**
Electrodes modified with redox probe solution in room temperature ionic liquids.
Oxford University, Department of Physical and Theoretical Chemistry, Oxford, United Kingdom, 2005.

3. Opallo M.

Silicate based electrodes modified with redox liquid.

Fukui University, Applied Physisc Department, Fukui, Japan, 2005.

Kyoto University, Chemistry Department, Kyoto, Japan, 2005.

4. Stafiej J.

Symulacje procesów korozji oparte na stochastycznych automatach komórkowych.

Adam Mickiewicz University, Chemistry Department, Poznań, Poland, 2005.

DEPARTMENT VIII

ELECTROCHEMICAL OXIDATION OF GASEOUS FUELS (CRACOW)

Head of the Department: prof. dr hab. Leszek Suski
Phone: +48 12 266 03 41

PAPERS PUBLISHED IN SCIENTIFIC JOURNALS AND PROCEEDINGS OF SCIENTIFIC CONFERENCES

- 1. Bieniasz L.K.**
A singularity correction procedure for digital simulation of potential-step chronoamperometric transient in one dimensional homogeneous reaction-diffusion systems.
Electrochim. Acta, **50**, 3253-3261 (2005).
- 2. Mordarski G., Suski L., Kołacz J., Ruggiero M.**
Electrode open circuit potentials and oxidation process at Au and Pt electrodes/solid oxide electrolyte interfaces in common methane+air gas mixture.
Polish J. Chem., **79**, 1063-1077 (2005).
- 3. Mordarski G., Suski L., Ruggiero M., Kołacz J., Wyrwa J.**
Open-circuit-potentials of gas/electrode/YSZ boundary versus molten carbonate at medium temperatures. II. Potential response of Au, Pt and Ni-cermet electrodes in CH₄+O₂ gas mixtures.
Electrochim. Acta, **50**, 2781-2791 (2005).
- 4. Suski L., Kołacz J., Mordarski G., Ruggiero M.**
Determination of open-circuit potentials at gas/electrode/YSZ boundary versus molten carbonate reference electrodes at medium temperatures. I. Potentials of Au and Pt in O₂ and H₂+H₂O atmospheres.
Electrochim. Acta, **50**, 2771-2780 (2005).

- 5. Żurek S., Mosialek M., Tomczyk P., Oblakowska D.**
Investigation of the partial oxidation of methane at the interface metal (Pt, Au)/YSZ.
J. Electroceram., **15**, 83-93 (2005).

PAPERS IN PRESS PUBLISHED IN SCIENTIFIC JOURNALS

- 1. Tomczyk P., Żurek S., Mosialek M.**
Reakcje elektrodowe z udziałem CH₄ i O₂ na granicy faz metal (Pt, Au)/YSZ.
Wiadomości Chemiczne,

LECTURES AND COMMUNICATIONS PRESENTED AT SCIENTIFIC CONFERENCES

- 1. Bieniasz L.K.**
Electrochemical kinetic simulations using Hermitian finite-difference methods.
The 8th Meeting on Electrode Reaction Mechanism and Interfacial Structure, Freudenstadt-Lauterbad, Germany, 2005.
- 2. Mordarski G., Suski L., Kołacz J., Ruggiero M., Wyrwa J.**
Napięcia spoczynkowe jednokomorowego ogniwa paliwowego Au/YSZ/Pt zasilanego mieszaniną CH₄+O₂+Ar.
Konferencja „Zrównoważone Systemy Energetyczne. Nowe kierunki wytwarzania i wykorzystania energii”, Zakopane, Poland, 2005.
- 3. Suski L.**
Ogniwa paliwowe po 50-ciu latach rozwoju.
Seminarium „Materiały dla Ogniw Paliwowych”, Warsaw University of Technology, Material Engineering, 2005 (*invited lecture*).
- 4. Tomczyk P., Żurek S.**
Kinetyka reakcji elektrody tlenowej Pt/Nafion.
Symposium „Nowe Materiały dla Ogniw Paliwowych”, Wrocław, Poland, 2005.

- 5. Tomczyk P., Żurek S., Mosialek M.**
Reakcje elektrodowe z udziałem CH₄ i O₂ na granicy faz metal (Au, Pt)/YSZ.
Symposium „Nowe Materiały dla Ogniw Paliwowych”, Wrocław, Poland, 2005.

DEPARTMENT IX

PHOTOCHEMISTRY AND SPECTROSCOPY

Head of the Department: prof. dr hab. Jacek Waluk

Phone: +48 22 343 33 32

PAPERS PUBLISHED IN SCIENTIFIC JOURNALS AND PROCEEDINGS OF SCIENTIFIC CONFERENCES

- 1. Anastasova A., Kapturkiewicz A., Nowacki J.**
Os(dppe)(dppe monoxide)(CO)Cl₂ as an active intermediate in synthesis of strongly luminescent divalent osmium complexes.
Inorg. Chem. Commun., **8**, 1177-1180 (2005).
- 2. Bao Y., Everaert J., Pietraszkiewicz M., Pietraszkiewicz O., Bohets H., Geise H.J., Peng B.X., Nagels L.J.**
Behaviour of nucleotides and oligonucleotides in potentiometric HPLC detection.
Anal. Chim. Acta, **550**, 130-136 (2005).
- 3. Borowiak T., Kubicki M., Dutkiewicz G., Pietraszkiewicz M., Pietraszkiewicz O.**
Crystal structures of 1,5,9,18,22,26-hexaaza[11.11]-*p*-cyclophane adducts; Two-dimensional supramolecular networks.
J. Incl. Phenom. & Macrocycl. Chem., **51**, 181-189 (2005).
- 4. Borowicz P., Leś A., Adamowicz L., Waluk J.**
Vibrational spectroscopy of hydroxy-heterobiaryls. IR-active modes of [2,2'-bipyridyl]-3,3'-diol.
Photochem. Photobiol. Sci., **4**, 143-148 (2005).

5. **Borowicz P., Nickel B.**
Triplet-triplet annihilation in viscous solutions as an example of non-Fickian diffusion.
J. Opt. Soc. Amer. B, **22**, 315-322 (2005).
6. **Czerwieniec R., Kapturkiewicz A., Lipkowski J.¹, Nowacki J.**
Re(I)(tricarbonyl)⁺ complexes with the 2-(2-pyridyl)-N-methyl-benzimidazole, 2-(2-pyridyl)-benzoxazole and 2-(2-pyridyl)benzothiazole ligands – syntheses, structures, electrochemical and spectroscopic studies.
Inorg. Chim. Acta, **358**, 2701-2710 (2005).
7. **Czerwieniec R., Kapturkiewicz A., Nowacki J.**
A new cyclometalated rhenium(I)(CO)₄⁺ complex.
Inorg. Chem. Commun., **8**, 1101-1104 (2005).
8. **Czerwieniec R., Kapturkiewicz A., Nowacki J.**
Re(I)(tricarbonyl)⁺ complexes with anionic N \cap S⁻ thioxalato ligand.
Inorg. Chem. Commun., **8**, 34-37 (2005).
9. **Dobkowski J., Lobko Y., Gawinkowski S., Waluk J.**
Energy relaxation paths in matrix-isolated excited molecules: comparison of porphycene with dibenzoporphycenes.
Chem. Phys. Lett., **416**, 128-132 (2005).
10. **Dobrowolski J., Rode J.E., Kołos R., Jamróz M.H., Bajdor K., Mazurek A.P.**
Ar-matrix IR spectra of 5-halouracils.
J. Phys. Chem. A, **109**, 2167-2182 (2005).
11. **Drobizhev M., Stepanenko Y., Dzenis Y., Karotki A., Rebane A., Taylor P.N., Anderson H.L.**
Extremely strong near-IR two-photon absorption in conjugated porphyrin dimers: quantitative description with three-essential-states model.
J. Phys. Chem. B, **109**, 7223-7236 (2005).

¹ Department II

- 12. Fita P., Luzina E., Dziembowska T., Kopec D., Piątkowski P., Radzewicz C., Grabowska A.**
Keto-enol tautomerism of two structurally related Schiff bases. Direct and indirect way of creation of the excited keto-tautomer.
Chem. Phys.Lett., **416**, 305-310 (2005).
- 13. Fita P., Stepanenko Y., Radzewicz C.**
Femtosecond transient fluorescence spectrometer based on parametric amplification.
Appl. Phys. Lett., **86**, 021909-021911 (2005).
- 14. Gorski A., Köhler T., Seidel D., Lee J.T., Orzanowska G., Sessler J.L., Waluk J.**
Electronic structure, spectra and magnetic circular dichroism of cyclohexa-, cyclohepta- and cyclooctapyrrole.
Chem. Eur. J., **11**, 4179-4184 (2005).
- 15. Johannessen C., Gorski A., Waluk J., Spanget-Larsen J.**
Electronic states of anthanthrene. Linear and magnetic circular dichroism, fluorescence anisotropy, and quantum chemical calculations.
Polycycl. Aromat. Comp., **25**, 23-45 (2005).
- 16. Kapturkiewicz A., Nowacki J., Borowicz P.**
Electrochemiluminescence studies of the cyclometalated iridium(III) $L_2Ir(\text{acetyl acetate})$ complexes.
Electrochim. Acta, **50**, 3395-3400 (2005).
- 17. Karpiuk J., Svartsov Y.N., Nowacki J.**
Photoinduced intramolecular charge transfer to meta position of benzene ring in 6-aminophthalides.
Phys. Chem. Chem. Phys., **7**, 4070-4081(2005).
- 18. Klonkowski A.M., Szalkowska I., Lis S., Pietraszkiewicz M., Hnatejko Z.**
Luminescent materials consisting of Eu(III) ions complexed with cryptand ligand and coligands entrapped in xerogel matrices.
J. Lumin., **115**, 122-130 (2005).

- 19. Klonkowski A.M., Szalkowska I., Pietraszkiewicz M., Hnatejko Z., Lis S., Klukowska A., Posset U.**
Influence of xerogel matrices and co-ligands on luminescence parameters in materials with an europium(III) cryptate.
J. Non-Crystalline Solids, **351**, 2047-2056 (2005).
- 20. Kowalczyńska H.M., Nowak-Wyrzykowska M., Kołos R., Dobkowski J., Kamiński J.**
Fibronectin adsorption and arrangement on copolymer surfaces and their significance in cell adhesion.
J. Biomed. Mat. Research, **72A**, 228-236 (2005).
- 21. Kyrychenko A., Waluk J.**
Molecular dynamics simulations of matrix deposition. III. Site structure analysis for porphycene in argon and xenon.
J. Chem. Phys., **123**, 064706-1 to 10 (2005).
- 22. Mirończyk A., Jankowski A., Chyla A., Borowicz P.**
Proton translocation in monomolecular Langmuir-Blodgett films including 2-naphtol and 1,4-anthraquinone derivatives.
J. Phys. Chem. B, **109**, 6215-6224 (2005).
- 23. Mordziński A., Leś A., Stepanenko Y., Rycombel J., Adamowicz L.**
 S_0 and S_1 spectroscopy of jet cooled 9-cyano-10-methylanthracene: The methyl group as a molecular rotor.
J. Mol. Spectrosc., **233**, 98-109 (2005).
- 24. Piwoński H., Kołos R., Meixner A., Sepioł J.**
Optimal oxygen concentration for the detection of single indocarbocyanine molecules in a polymeric matrix.
Chem. Phys. Lett, **405**, 352-356 (2005).
- 25. Piwoński H., Stupperich C., Hartschuh A., Sepioł J., Meixner A., Waluk J.**
Imaging of tautomerism in a single molecule.
J. Am. Chem. Soc., **127**, 5302-5303 (2005).

- 26. Radecka H., Szymańska I., Pietraszkiewicz M., Pietraszkiewicz O., Aoki H., Umezawa Y.**
Intramolecular ion-channel sensors using gold electrodes immobilized with macrocyclic polyamines for voltammetric detection of adenine nucleotides.
Chemia Analityczna, **50**, 85-102 (2005).
- 27. Rebane A., Christensson N., Drobizhev M., Stepanenko Y., Spangler C.W.**
Quantum interference in organic solid.
Opt. Express, **13**, 6033-6038 (2005).
- 28. Staniński K., Lis S., Pietraszkiewicz M.**
Spectroscopic study of DHDA complex formation of d- and f-electron metal ions in methanol solution.
J. Fluorescence, **15**, 493-497 (2005).
- 29. Stepanenko Y., Radzewicz C.**
High-gain multipass noncollinear optical parametric chirped pulse amplifier.
Appl. Phys. Lett., **86**, 211120-211123 (2005).
- 30. Stepanenko Y., Sobolewski A.L., Mordziński A.**
Electronic spectroscopy and methyl internal rotation dynamics of 9,10-dimethylantracene.
J. Mol. Spectrosc., **233**, 15-22 (2005).
- 31. Szydłowska I., Kubicki J., Herbich J.**
Picosecond kinetics of excited-state charge separation in 4-(dimethylamino)pyridine.
Photochem. Photobiol. Sci., **4**, 106-112 (2005).

PAPERS IN SCIENTIFIC JOURNALS AND MONOGRAPHS IN PRESS

- 1. Borowiak T., Dutkiewicz G., Kubicki M., Pietraszkiewicz M., Pietraszkiewicz O.**
Molecular recognition. 1. Crystal structures of hexaazamacrocyclic amines containing p-xylylic spacers and their adducts with acids.
Beilstein J. Org. Chem.,
- 2. Eremenko A., Smirnowa N., Starukh G., Chuiko A., Rotkiewicz K., Danel A.**
Photophysical properties of TICT molecule adsorbed on semiconductor titania-silica colloids.
J. Photochem. Photobiol. A,
- 3. Grabka D., Boszczyk W., Stepanenko Y., Styrz S., Kubik M., Rotkiewicz K., Danel A.**
Acid-base properties of 3,5-dimethyl-1,7-diphenyl derivative of bis-pyrazolo-pyridine in non-aqueous solutions.
J. Photochem. Photobiol. A,
- 4. Karpiuk J., Lochbrunner S., Riedle E.**
Intramolecular electron transfer beyond solvent control: probing sub-100 fs photoinduced electron transfer in triarylmethane lactones.
Proceedings of Femtochemistry VII, 2005, Elsevier,
- 5. Reisfeld R., Saraidarov T., Gaft T., Pietraszkiewicz M.**
Luminescence of new Eu³⁺ complexes incorporated in inorganic and ormocer sol-gel matrices.
J. Optical Materials,
- 6. Waluk J.**
Tautomerization in porphycenes.
Handbook of Hydrogen Transfer, Volume 1: Physical and Chemical Aspects of Hydrogen Transfer, eds. J. T. Hynes and H.-H. Limbach (Wiley-VCH, Weinheim, 2006).

- 7. Wierzchowski J., Sepiol J., Sulikowski D., Kierdaszuk B., Shugar D.**
Fluorescence emission properties of 8-azaxanthine and its N-alkyl derivatives: Excited state proton transfer, and potential applications in enzymology.
J. Photochem. Photobiol. A,

LECTURES AND COMMUNICATIONS PRESENTED AT SCIENTIFIC CONFERENCES

- 1. Anastasova S., Kapturkiewicz A.**
Luminescent osmium(II) complexes.
CPM Centre of Excellence Workshop: "Novel Experimental Techniques and Instrumentation", Lesko, Poland, 2005.
- 2. Białkowski B., Ratajska-Gadomska B., Gadomski W., Radzewicz C.**
Ultrashort optical Kerr effect spectroscopy of water confined in nanopores of gelatin gel.
CLEO Europe/EQEC 2005, Monachium, Germany, 2005.
- 3. Borowiak T., Dutkiewicz G., Kubicki M., Pietraszkiewicz M., Pietraszkiewicz O.**
Struktura kryształów adduktów 1,5,9,18,22,26-heksaaza[11.11]-p-cyklofanu; dwuwymiarowe sieci supramolekularne.
XLVIII Zjazd PTChem i SiTPChem, Poznań, Poland, 2005.
VII Krajowa Konferencja Chemii Supramolekularnej, Krutyń, Poland, 2005.
- 4. Borowiak T., Dutkiewicz G., Kubicki M., Pietraszkiewicz M., Pietraszkiewicz O., Mattes R.**
Macrocyclic amines and their adducts with acids.
XX Congress of the International Union of Crystallography, Florence, Italy, 2005.
- 5. Borowicz P., Nickel B.**
Triplet-triplet annihilation in viscous solutions as an example of non-Fickian diffusion.
CPM Centre of Excellence Workshop: "Novel Experimental Techniques and Instrumentation", Lesko, Poland, 2005.

- 6. Czerwieniec R.**
Physicochemical properties of $\text{Re}(\text{CO})_3^+$ complexes.
Polish Photoscience Seminar, Warsaw, Poland, 2005.
- 7. Czerwieniec R., Kapturkiewicz A.**
 $\text{Re}(\text{CO})_3^+$ complexes with heteroaromatic bidentate ligands.
CPM Centre of Excellence Workshop: "Novel Experimental Techniques and Instrumentation", Lesko, Poland, 2005.
- 8. Dobkowski J.**
Time-resolved spectroscopy of selected acetophenone derivatives.
Polish Photoscience Seminar, Kraków, Poland, 2005.
- 9. Dobkowski J., Labko Y., Sazanovich I.V., Waluk J.**
Time-resolved spectroscopy of porphycene and its derivatives embedded in low temperature matrices.
CPM Centre of Excellence Workshop: "Novel Experimental Techniques and Instrumentation", Lesko, Poland, 2005.
- 10. Eremenko A., Smirnova N., Khanina O., Rotkiewicz K.**
Spectroscopic characterization of the inclusion complexes of electron donor substituted bis-pyrazolopyridine with cyclodextrins on the titania – silica surfaces.
XVII International School-seminar "Spectroscopy of Molecules and Crystals", Beregove, Crimea, Ukraine, 2005.
- 11. Fita P., Luzina E., Kopeć D., Dziembowska T., Piątkowski P., Radzewicz C., Grabowska A.**
Molecular puzzles – unveiling proton transfer mechanism in aromatic Schiff bases.
CPM Centre of Excellence Workshop: "Novel Experimental Techniques and Instrumentation", Lesko, Poland, 2005.
- 12. Gawinkowski S., Kyrychenko A., Waluk J.**
Spectroscopy of matrix-isolated porphycenes in nonclassical deposition.
CPM Centre of Excellence Workshop: "Novel Experimental Techniques and Instrumentation", Lesko, Poland, 2005.

- 13. Gawinkowski S., Waluk J.**
Vibrational structure of porphycenes.
XVIth International Conference Horizons in Hydrogen Bond Research and Graduate School/Hydrogen Bonding and Proton Transfer, Roskilde, Denmark, 2005.
- 14. Gil A., Pietraszkiewicz O., Pietraszkiewicz M., Bilewicz R.**
Organisation of the derivatives of hexaazacyclophane and ibuprofen in Langmuir films.
CPM Centre of Excellence Workshop: “Novel Experimental Techniques and Instrumentation”, Lesko, Poland, 2005.
- 15. Gorski A., Posokhov Y., Duus F., Spanget-Larsen J., Hansen P.E., Waluk J.**
Photoorientation and depolarization: two complementary ways of studying molecular structure and dynamics.
CPM Centre of Excellence Workshop: “Novel Experimental Techniques and Instrumentation”, Lesko, Poland, 2005.
- 16. Gorski A., Vogel E., Sessler J.L., Waluk J.**
Polarization spectroscopy as a perfect tool for the investigation of double hydrogen transfer.
XVIth International Conference Horizons in Hydrogen Bond Research and Graduate School/Hydrogen Bonding and Proton Transfer, Roskilde, Denmark, 2005.
- 17. Hansen B.K.V., Duus F., Hansen P.E., Waluk J., Spanget-Larsen J.**
Photoinduced proton transfer in monothio-acetylacetone. New computational insights.
CPM Centre of Excellence Workshop: “Novel Experimental Techniques and Instrumentation”, Lesko, Poland, 2005.
- 18. Hansen P.E., Duus F., Hansen B.V., Trung N.T., Spanget-Larsen J., Gorski A., Waluk J.**
Deuterium isotope effects in the study of intramolecularly hydrogen-bonded thioxo compounds in the liquid and solid state.
CPM Centre of Excellence Workshop: “Novel Experimental Techniques and Instrumentation”, Lesko, Poland, 2005.

- 19. Kapturkiewicz A.**
Electrochemiluminescence studies of the iridium(III) cyclometalated complexes.
8th Meeting “Electrode Reaction Mechanism and Interfacial Structure (ERMIS)”, Freudenstadt-Lauterbad, Germany, 2005.
- 20. Kapturkiewicz A.**
Electron transfer generation and annihilation of the excited MLCT states.
CPM Centre of Excellence Workshop: “Novel Experimental Techniques and Instrumentation”, Lesko, Poland, 2005.
- 21. Karolak E., Nowacki J., Karpiuk J.**
Intramolecular exciplexes in donor-acceptor systems based on tetrahedral carbon atom.
CPM Centre of Excellence Workshop: “Novel Experimental Techniques and Instrumentation”, Lesko, Poland, 2005.
- 22. Karpiuk J.**
Spiro-like donor-acceptor architecture supporting ultrafast charge separation: sub-100 fs photoinduced intramolecular electron transfer in triarylmethane lactones.
Gordon Research Conference on Photochemistry, Smithfield, USA, 2005.
- 23. Karpiuk J.**
Spiro-like donor-acceptor systems: a promising architecture for ultrafast photoinduced electron transfer studies.
CPM Centre of Excellence Workshop: “Novel Experimental Techniques and Instrumentation”, Lesko, Poland, 2005.
- 24. Karpiuk J.**
Sub-100fs photoinduced intramolecular electron transfer in spiro-type donor-acceptor molecular architecture.
Polish Photoscience Seminar, Kraków, Poland, 2005.
- 25. Karpiuk J., Lochbrunner S., Riedle E.**
Electron transfer faster than inertial solvation: a vibrational mode to promote photoinduced ET in triphenylmethane lactones.
65 Tagung der Deutschen Physikalischen Gesellschaft, Berlin, Germany, 2005.

- 26. Karpiuk J., Lochbrunner S., Riedle E.**
Intramolecular electron transfer beyond solvent control: probing a sub-100 fs photoinduced electron transfer in triarylmethane lactones. Femtochemistry VII, Washington, USA, 2005.
- 27. Kijak M., Buma W.J., Thummel R.P., Waluk J.**
2-(2'-Pyridyl)pyrrole: a molecule with unusual proton transfer properties.
XXIInd International Conference on Photochemistry, Cairns, Australia, 2005.
- 28. Kijak M., Buma W.J., Thummel R.P., Waluk J.**
Hydrogen-bond induced process in 2-(2'-pyridyl)pyrrole.
XVIth International Conference Horizons in Hydrogen Bond Research and Graduate School/Hydrogen Bonding and Proton Transfer, Denmark, 2005.
- 29. Kijak M., Buma W.J., Thummel R.P., Waluk J.**
Phototautomerization processes in 2-(2'-pyridyl)pyrrole.
CPM Centre of Excellence Workshop: "Novel Experimental Techniques and Instrumentation", Lesko, Poland, 2005.
- 30. Kołos R.**
Multilaminar cryogenic matrices. A versatile tool for low-temperature chemistry.
CPM Centre of Excellence Workshop: "Novel Experimental Techniques and Instrumentation", Lesko, Poland, 2005.
- 31. Kołos R., Gronowski M., Botschwina P.**
Search for matrix-isolated cyanoacetylene-related ions.
MATRIX 2005 – The Physics and Chemistry of Matrix-Isolated Species, Funchal, Portugal, 2005.
- 32. Kudelski M., Waluk J.**
Magnetic circular dichroism of large polycyclic aromatic hydrocarbons: Testing the limits of the perimeter model.
CPM Centre of Excellence Workshop: "Novel Experimental Techniques and Instrumentation", Lesko, Poland, 2005.

- 33. Kyrychenko A., Gawinkowski S., Waluk J.**
Molecular dynamics simulations of trapping site structure for porphycene derivatives in argon and xenon matrices.
CPM Centre of Excellence Workshop: “Novel Experimental Techniques and Instrumentation”, Lesko, Poland, 2005.
- 34. Luzina E., Dobkowski J., Sepioł J., Mordziński A.**
Double benzoxazoles with one internal hydrogen bond. Influence of alkyl substitutes on their photophysics.
XVIth International Conference Horizons in Hydrogen Bond Research and Graduate School/Hydrogen Bonding and Proton Transfer, Dania, 2005.
- 35. Luzina L.**
Time-resolved spectroscopy of „double” benzoxazole.
Polish Photoscience Seminar, Kraków, Poland, 2005.
- 36. Luzina L., Sepioł J., Mordziński A.**
Proton transfer spectroscopy of “double” benzoxazoles in the supersonic jet. Deuterium isotope effect.
CPM Centre of Excellence Workshop: “Novel Experimental Techniques and Instrumentation”, Lesko, Poland, 2005.
- 37. Nosenko Y., Brutschy B., Herbich J., Kyrychenko A., Thummel R.P., Waluk J.**
Laser spectroscopy and structure of 1H-pyrrolo[3,2-*h*]quinoline clusters with methanol and water isolated in supersonic jet.
CPM Centre of Excellence Workshop: “Novel Experimental Techniques and Instrumentation”, Lesko, Poland, 2005.
- 38. Petkova I., Mudadu M.S., Thummel R.P., Buma W.J., Waluk J.**
Photophysical properties of 2-(2'-pyridyl)benzoindoles.
CPM Centre of Excellence Workshop: “Novel Experimental Techniques and Instrumentation”, Lesko, Poland, 2005.
- 39. Pietraszkiewicz M.**
“PhD Day Workshop” Training Committee.
OLLA Workshop Dresden, Germany, 2005.

- 40. Pietraszkiewicz M.**
Lanthanide based electroluminescent materials.
OLLA Project Workshop, Pommersfelden, Germany, 2005.
- 41. Pietraszkiewicz M.**
Molecular recognition of organic acids by polyazamacrocycles.
Symposium IChF PAN and RUCA University in Antwerp, Leuven,
Belgium, 2005.
- 42. Pietraszkiewicz M.**
Red emitters for OLEDs: Eu(III) complexes versus Ir(III) complexes.
Literature comparative account.
VII Krajowa Konferencja Chemii Supramolekularnej, Krutyń, Poland,
2005.
- 43. Pietraszkiewicz M.**
Red emitters for OLEDs: Eu(III) complexes. Literature comparative
account.
CPM Centre of Excellence Workshop: "Novel Experimental
Techniques and Instrumentation", Lesko, Poland, 2005.
- 44. Pietraszkiewicz M.**
Synthetic and structural aspects of RE complexes.
Summer School 2005 (OLLA Project), Krutyń, Poland, 2005.
- 45. Pietraszkiewicz M.**
Synthetic strategies for ionisable ligands for RE complexes.
Summer School 2005 (OLLA Project), Krutyń, Poland, 2005.
- 46. Pietraszkiewicz M.**
Synthetic strategies for non-ionisable ligands for RE complexes.
Summer School 2005 (OLLA Project), Krutyń, Poland, 2005.
- 47. Pietraszkiewicz O.**
Molecular recognition of organic species by calix[4]resorcinarenes.
IChF PAN and RUCA University Symposium in Antwerp, Leuven,
Belgium, 2005.

- 48. Pietraszkiewicz O.**
Our contribution to FP6-IP “OLLA” project.
CPM Centre of Excellence Workshop: “Novel Experimental Techniques and Instrumentation”, Lesko, Poland, 2005.
- 49. Pietraszkiewicz O., Karpiuk J., Pietraszkiewicz M.**
Photoluminescent lanthanide complexes involving p-o ligating groups.
Spectroscopic studies.
International Symposium Advances in Supramolecular Chemistry on the Occasion of the 40th Anniversary of Jean-Marie Lehn’s Laboratory, Strasbourg, 2005.
- 50. Pietraszkiewicz O., Pietraszkiewicz M., Karpiuk J.**
Our Contribution to FP6-IP OLLA Project.
CPM Centre of Excellence Workshop, “Novel Experimental Techniques and Instrumentation”, Lesko, Poland, 2005.
- 51. Piwoński H.**
Photostability of carbocyanine dye in polymeric matrices: from the ensemble to the single molecule.
CPM Centre of Excellence Workshop: “Novel Experimental Techniques and Instrumentation”, Lesko, Poland, 2005.
- 52. Piwoński H., Sepioł J., Waluk J.**
Tautomerism in a single molecule.
Workshop on Single Molecule Spectroscopy and Ultrasensitive Analysis in the Life Sciences, Berlin, Germany, 2005.
- 53. Radzewicz C.**
Informatyka kwantowa.
XXXVIII Zjazd Fizyków Polskich, Warsaw, Poland, 2005 (*plenary lecture*).
- 54. Radzewicz C., Wnuk P.**
Coherent control in three-wave mixing.
CPM Centre of Excellence Workshop: “Novel Experimental Techniques and Instrumentation”, Lesko, Poland, 2005.

- 55. Sazanovich I.V., Panarin A.Yu., Dobkowski J., Négrerie M., Chirvony V.S.**
Fast excited state relaxation of β -NO₂ substituted derivative of H₂TMPyP₄ complexed with nucleotides.
ICONO/LAT 2005, St. Petersburg, Russia, 2005.
- 56. Schmidhammer U., Bizjak T., Lochbrunner S., Riedle E., Karpiuk J.**
50 femtosecond electron transfer in triarylmethane lactones.
Conference on Lasers and Electro-Optics, Monachium, Germany, 2005.
- 57. Sepiol J.**
Can we avoid photobleaching and photoblinking of dye molecules?
CPM Centre of Excellence Workshop: "Novel Experimental Techniques and Instrumentation", Lesko, Poland, 2005.
- 58. Stepanenko Y.**
Femtosecond parametric amplifiers.
Polish Photoscience Seminar, Kraków, Poland, 2005.
- 59. Stepanenko Y., Radzewicz C.**
High-gain multipass optical parametric chirped pulse amplifier.
CPM Centre of Excellence Workshop: "Novel Experimental Techniques and Instrumentation", Lesko, Poland, 2005.
- 60. Svartsov Y.N., Sobolewski A.L., Karpiuk J.**
The role of dissociative $\pi\sigma^*$ state in photophysics of meta-aminophthalides. A quantum-chemical study.
CPM Centre of Excellence Workshop: "Novel Experimental Techniques and Instrumentation", Lesko, Poland, 2005.
- 61. Szydłowska I., Brutschy B., Tarakeshwar P., Herbich J.**
Structure and hydrogen bonding of 4-diethylaminopyridine complexes with H₂O and CH₃OH studied by IR/R2PI spectroscopy.
XVIth International Conference "Horizons in Hydrogen Bond Research" and Graduate School "Hydrogen Bonding and Hydrogen Transfer", Roskilde, Denmark, 2005.

- 62. Szydłowska I., Nosenko Y., Brutschy B., Tarakeshwar P., Herbich J.**
Structure and hydrogen bonding of 4-diethylaminopyridine complexes with H₂O and CH₃OH studied by IR/R2PI spectroscopy.
CPM Centre of Excellence Workshop: “Novel Experimental Techniques and Instrumentation”, Lesko, Poland, 2005.
- 63. Szydłowska I., Zielińska A., Nowacki J., Herbich J.**
TICT states of 4-dialkylaminopyridines.
CPM Centre of Excellence Workshop: “Novel Experimental Techniques and Instrumentation”, Lesko, Poland, 2005.
- 64. Urbańska N., Piwoński H., Vdovin A., Pietraszkiewicz M., Sessler J., Waluk J.**
Synthesis of substituted porphycenes, laser spectroscopy, and tautomerization in single molecules of porphycene.
CPM Centre of Excellence Workshop: “Novel Experimental Techniques and Instrumentation”, Lesko, Poland, 2005.
- 65. Vdovin A., Sepioł J., Urbańska N., Pietraszkiewicz M., Waluk J.**
Tautomerization in bridge-substituted porphycenes: Search for trans and cis tautomeric forms by laser spectroscopy studies in supersonic jet.
CPM Centre of Excellence Workshop: “Novel Experimental Techniques and Instrumentation”, Lesko, Poland, 2005.
- 66. Waluk J.**
Fototautomeryzacja katalizowana przez wiązania wodorowe.
XLVIII Zjazd PTChem, Poznań, Poland, 2005 (*invited lecture*).
- 67. Waluk J.**
Basic photophysics.
Summer School 2005: Advanced Luminescent Materials Based on Lanthanide Organic/Inorganic Complexes, Krutyń, Poland, 2005 (*invited lecture*).
- 68. Waluk J.**
Spectroscopy and photophysics of porphyrin isomers.
XXIInd International Conference on Photochemistry, Cairns, Australia, 2005 (*invited lecture*).

69. **Wiosna G., Petkova I., Mudadu M.S., Thummel R.P., Waluk J.**
Ultrafast excited state deactivation processes in 7-(2'-pyridyl)pyrrole.
CPM Centre of Excellence Workshop: "Novel Experimental
Techniques and Instrumentation", Lesko, Poland, 2005.
70. **Wiosna G., Petkova I., Thummel R.P., Dobkowski J.,
Sazanovich I., Sobolewski A., Buma W.J., Waluk J.**
Rapid excited state deactivation processes in 7-(2'-pyridyl)pyrrole.
XVIth International Conference Horizons in Hydrogen Bond Research
and Graduate School/Hydrogen Bonding and Proton Transfer,
Roskilde, Denmark, 2005.

**INVITED LECTURES PRESENTED AT UNIVERSITIES AND
OTHER SCIENTIFIC CENTERS (UNPUBLISHED)**

1. **Dobkowski J.**
TICT- the most controversial state of the last 40 years: the case of
carbonyl p-derivatives of N, N-dimethylaniline.
The Hebrew University, Jerusalem, 2005.
2. **Kołos R.**
Astrochemia - co to takiego?
Polish Chemical Society, 2005.
3. **Rotkiewicz K.**
Reactivity of TICT molecules; focus on protolytic processes.
Institute of Surface Chemistry, Ukrainian National Academy of
Sciences, Kiev, Ukraine, 2005.
4. **Waluk J.**
Podwójne wiązania wodorowe w układach azaaromatycznych.
Wrocław University, Chemistry Department, 2005.
5. **Waluk J.**
Wpływ wiązania wodorowego na strukturę, spektroskopię, fotofizykę
i reaktywność cząsteczek azaaromatycznych.
Meeting of Świętokrzyskie Division of the Polish Chemical Society,
Kielce, Poland, 2005.

DEPARTMENT X

QUANTUM THEORY OF SOLIDS AND MOLECULES

Head of the Department: prof. dr hab. Andrzej Holas

Phone: +48 22 343 32 43

PAPERS PUBLISHED IN SCIENTIFIC JOURNALS AND PROCEEDINGS OF SCIENTIFIC CONFERENCES

- 1. Balawender R., Geerlings P.**
Density-functional theory-based chemical reactivity indices in the Hartree-Fock method. I. Unrestricted Hartree-Fock method for a noninteger number of electrons.
J. Chem. Phys., **123**, 124102-1 to 13 (2005).
- 2. Balawender R., Geerlings P.**
DFT-based chemical reactivity indices in the Hartree-Fock method. II. Fukui function, chemical potential, and hardness.
J. Chem. Phys., **123**, 124103-1 to 16 (2005).
- 3. Dinadayalane T.C., Gorb L., Dodziuk H., Leszczyński J.**
Modelling of the stabilization of the system consisting of a single walled (5.5) carbon nanotube $C_{60}H_{20}$ with cumulenic or acetylenic chain.
AIP Conf. Proc., **786**, 436-439 (2005).
- 4. Dodziuk H.**
Modeling complexes of H_2 molecules in fullerenes.
Chem. Phys. Lett., **410**, 39-41 (2005).

5. **Dodziuk H., Jaszúński M., Schilf W.**
 ^1H and ^{13}C NMR chemical shifts and spin-spin coupling constants in *trans*- and *cis*-decalins.
Magn. Res. Chem., **43**, 639-646 (2005).
6. **Holas A., Cinal M.**
Exact and approximate exchange potentials investigated in terms of their matrix elements with the Kohn-Sham orbitals.
Phys. Rev. A, **72**, 032503-1 to 22 (2005).
7. **Holas A., March N.H., Rubio A.**
Differential virial theorem in relation to a sum rule for the exchange-correlation force in density-functional theory.
J. Chem. Phys., **123**, 194104-1 to 4 (2005).

MONOGRAPHS AND PAPERS IN PRESS IN SCIENTIFIC JOURNALS

1. **Dodziuk H.**
Modeling of CyDs and their complexes,
in: "Cyclodextrins and Their Complexes, Chemistry, Analytica Methods, Applications", (ed. H. Dodziuk)
Wiley-VCH, Weinheim, Germany,
2. **Dodziuk H.**
Molecules with holes. Cyclodextrins,
in: "Cyclodextrins and Their Complexes, Chemistry, Analytica Methods, Applications", (ed. H. Dodziuk)
Wiley-VCH, Weinheim, Germany,
3. **Dodziuk H.**
Other physicochemical methods. Introductory remarks,
in: "Cyclodextrins and Their Complexes, Chemistry, Analytica Methods, Applications", (ed. H. Dodziuk)
Wiley-VCH, Weinheim, Germany,

4. **Dodziuk H.**
Applications other than in pharmaceutical industry. Introductory remarks,
in: " Cyclodextrins and Their Complexes, Chemistry, Analytical Methods, Applications", (ed. H. Dodziuk)
Wiley-VCH, Weinheim, Germany,
5. **Holas A., March N.H.**
Generalization to higher dimensions of one-dimensional differential equation for Slater sum of an inhomogeneous electron liquid for a given local potential.
Phys. Chem. Liq.,
6. **Olszewski S., Roliński T.**
Dingle temperature calculated for electrons gyrating in a perfect crystal lattice.
Physica B,
7. **Samal P., Harbola M.K., Holas A.**
Density-to-potential map in excited-state density-functional theory.
Chem. Phys. Letters,

LECTURES AND COMMUNICATIONS PRESENTED AT SCIENTIFIC CONFERENCES

1. **Balawender R.**
The DFT based chemical reactivity indices in the coupled perturbed ensemble UHF method.
11th International Conference on the Applications of Density Functional Theory in Chemistry and Physics, Geneva, Switzerland, 2005.
2. **Dinadayalane T.C., Gorb L., Dodziuk H., Leszczyński J.**
Modelling of the stabilization of the system consisting of a single walled (5.5) carbon nanotube C₆₀H₂₀ with cumulenic or acetylenic chain.
XIXth International Winterschool on Electronic Properties of Novel Materials, Kirchberg, Austria, 2005.

3. **Dodziuk H.**
Modelling the structure of fullerenes and their endohedral complexes with nontrivial topological properties.
4th Conference Current Trends in Computational Chemistry, Jackson, USA, 2005 (*invited lecture*).
4. **Dodziuk H.**
Topological chemistry.
Central European School on Physical Organic Chemistry, Czocha, 2005.
5. **Dodziuk H., Jaszuński M., Schilf W.**
¹H and ¹³C NMR chemical shifts and spin-spin coupling constants in *trans*- and *cis*-decalins.
Symposium Nuclear Magnetic Resonance in Chemistry, Biology and Medicine, Warsaw, Poland, 2005 (*invited lecture*).
6. **Holas A.**
Study of almost exact exchange potentials of the density-functional theory.
The Conference „Neutron Scattering Spectroscopy and Related Problems” (Janik’s Friends Meeting), Zakopane, Poland, 2005.
7. **Holas A., Cinal M.**
Improving the common-energy-denominator approximation to the exchange potential.
11th International Conference on the Applications of Density Functional Theory in Chemistry and Physics, Geneva, Switzerland, 2005.

C H E M I P A N
RESEARCH & DEVELOPMENT LABORATORIES

Director: Marek Cieślak, M.Sc.
Phone: +48 22 632 45 13

MONOGRAPHS

- 1. Cybulski A., Edvinsson Albers R., Moulijn J.A.**
Monolithic catalysts for three-phase processes,
in: “Structured Catalysts and Reactors”, (eds. A. Cybulski, J.A.
Moulijn), 2nd Ed.,
Taylor & Francis, Boca Raton, USA, 2005, pp. 355-392.
- 2. Cybulski A., Moulijn J.A.**
The present and the future of structured catalysts – An overview,
in: “Structured Catalysts and Reactors”, (eds. A. Cybulski, J.A.
Moulijn), 2nd Ed.,
Taylor & Francis, Boca Raton, USA, 2005, pp. 1-19.
- 3. Kreutzer M., Kapteijn F., Moulijn J.A., Andersson B.,
Cybulski A.**
Two-phase segmented flow in capillaries and monolith reactors,
in: “Structured Catalysts and Reactors”, (eds. A. Cybulski, J.A.
Moulijn), 2nd Ed.,
Taylor & Francis, Boca Raton, USA, 2005, pp. 393-434.
- 4. Kreutzer M., Kapteijn F., Moulijn J.A., Edvinsson Albers R.,
Cybulski A.**
Modeling and design of monolith reactors for three-phase processes,
in: “Structured Catalysts and Reactors”, (eds. A. Cybulski, J.A.
Moulijn), 2nd Ed.,
Taylor & Francis, Boca Raton, USA, 2005, pp. 435-478

PAPERS PUBLISHED IN SCIENTIFIC JOURNALS

- 1. Kudyba I., Jóźwik J., Romański J., Raczko J., Jurczak J.**
The synthesis of oximes and ditroalkanes bearing a chiral auxiliary unit: convenient substrates for the preparation of enantiomerically pure nitrile oxides.
Tetrahedron: Asymmetry, **16**, 2257-2262 (2005).

MISCELLANEA

1. **Dodziuk H.**
A. Huczko „Nanorurki Węglowe” - book review.
Orbital, 1-2, 50-51 (2005).
2. **Grabowski Z.R.**
W skorodowanym zwierciadle pamięci; szkic autobiograficzny.
Kwartalnik Historii Nauki i Techniki 2005, pp. 7-202.
3. **Olszewski S.**
Praktyczne podejście do kwantowego opisu układów materialnych
złożonych z wielu cząstek i jego ograniczenia,
in: „Filozoficzne i naukowo-przyrodnicze elementy obrazu świata”,
vol. 4 (ed. A. Latawiec, G. Bujak)
UKSW, Warsaw, Poland, 2005, pp. 68-75.

EDITORIAL ACTIVITY

SCIENTIFIC JOURNALS

Baranowski B.

- Editor in Chief of **Polish Journal of Chemistry**. Published by Polish Chemical Society
- Member of the International Advisory Board of **Journal of Nonequilibrium Thermodynamics**. Published by Walter de Gruyter

Grabowski Z.R.

- Member of the Editorial Board of **Journal of Fluorescence**. Published by Plenum Publishing Corporation

Herbich J.

- Member of the Editorial Board of **European Photochemistry Association Newsletter**. Published by European Photochemistry Association

Holyst R.

- Member of the Editorial Board of **Macromolecular Theory and Simulations**. Published by J.Wiley & Sons, Ltd.

Jabłoński A.

- Member of the International Advisory Board of **Surface and Interface Analysis**. Published by Wiley & Sons, Ltd.
- Member of the International Advisory Board of **Journal of Surface Analysis**. Published by Surface Analysis Society of Japan

Karpiuk J.

- Member of the Editorial Board of **Journal of Photochemistry and Photobiology A**. Published by Elsevier

Kutner W.

- Guest Editor of **Bioelectrochemistry**. Published by Elsevier

Lipkowski J.

- Associate Editor of **Journal of Coordination Chemistry**. Published by Gordon & Breach
- Member of the Editorial Board of **Journal of Inclusion Phenomena and Molecular Recognition in Chemistry**. Published by Springer
- Member of the International Advisory Committee of **Supramolecular Chemistry**. Published by Tylor & Francis
- Member of the International Advisory Committee of **Journal of Chemical Crystallography**. Published by Plenum Press
- Member of the Editorial Board of **Crystal Engineering**. Published by Pergamon
- Member of the Editorial Board of **Science – First Hand**. Published by INFOLIO Publishing House
- Member of the Editorial Board of **Chemical Analysis, Warsaw**. Published by Polish Chemical Society and Committee on Analytical Chemistry
- Member of the Advisory Board of **Moldavian Journal of Physical Sciences**
- Member of the Editorial Board of **Moldavian Journal of Chemistry**
- Member of the International Board of **Journal of Supramolecular Chemistry**. Published by Elsevier

Lunarska E.

- Member of the Editorial Board of **International Journal of the Physicochemical Mechanics of Materials**. Published by National Academy of Sciences of Ukraine.
- Member of the Editorial Board of **Advances in Mater. Sci.s**. Published by Polish Materials Society.
- Member of the Editorial Board of **Corrosion Reviews**. Published by Freund Publishing House Ltd.

Malanowski S.K.

- Member of the Advisory Board of **Journal of Chemical & Engineering Data**. Published by American Chemical Society
- Member of the Board of **Chemical and Biochemical Engineering Quarterly**. Published by Assoc. of Chemists & Chemical Engineers of Croatia

Suwińska K.

- Member of the Editorial Board of **Crystal Engineering**. Published by Pergamon

Waluk J.

- Member of the Editorial Board of **Journal of Luminescence**.
Published by Elsevier
- Member of the Editorial Board of **Chemical Physics**. Published by
Elsevier

BOOKS

Cybulski A., Moulijn J.A.

Editors, **Structured Catalysis and Reactors**,
published by Taylor & Francis, Boca Raton, USA, 2005.

Gierycz P.

Editor, **Calorimetry**,
published by Institute of Physical Chemistry of PAS, Warsaw, Poland,
2005.

Gierycz P., Zięborak-Tomaszkiewicz I.

Editors, **Thermodynamics for Environment**,
published by Institute of Physical Chemistry of PAS, Warsaw, Poland,
2005.

Zięborak-Tomaszkiewicz I.

Editor, **ECCTAE 2005, European Conference on Calorimetry and
Thermal Analysis for Environment**,
published by Institute of Physical Chemistry of PAS, Warsaw, Poland,
2005.

MEMBERSHIP IN INTERNATIONAL ORGANIZATIONS

Cybulski A.

- Working Party on Chemical Reaction Engineering of the European Federation of Chemical Engineering (member since 1981)

Dobkowski J.

- European Photochemistry Association (treasurer since 1994, 1998)

Filipek S.M.

- International Association for Advancement of High Pressure, Science and Technology AIRAPT (member of Executive Committee)

Herbich J.

- European Photochemistry Association (national representative since 1984)

Holyst R.

- Macromolecular Theory and Simulation

Jabłoński A.

- Surface Analysis Society of Japan (member of Advisory Committee since 1995)

Kutner W.

- Associate Member of the Interdivisional Committee on Terminology, Nomenclature Symbols of IUPAC
- Associate Member of the Analytical Chemistry Division Committee (V) of IUPAC

Olszewski S.

- European Academy of Sciences and Arts (full member since 1991)

Opallo M.

- International Society for Electrochemistry - V-ce President and President Elect of Division 6 Molecular Electrochemistry

Zielenkiewicz W.

- Real Academia de Ciencias e Artes de Barcelona (member since 1975)
- International Union of Pure and Applied Chemistry, IUPAC (affiliate member since 1988)

AUTHORS' INDEX

Those marked with * are not staff members of the Institute

A

*Abraham D.B.....	48
*Adamowicz L.....	113, 116
*Aladko L.S.....	19, 32
*Anastasova A.....	113
*Anastasova S.....	119
*Anderson H.L.....	114
*Andersson B.....	135
*André G.....	6
*Andreeva D.....	73, 87, 91, 98
*Andronati K.S.....	19
*Andruh M.....	20
*Andrzejewski B.....	80, 97
*Ansart F.....	64
*Aoki H.....	117
*Araki Y.....	35
*Arion V.....	13
Asztemborska M.....	11, 16, 17, 21, 24, 27, 38
*Atamas L.I.....	35
*Attanasio F.....	25, 26

B

*Babain V.A.....	35
*Babich L.....	21, 37
Babin V.....	48, 49
*Badiali J.P.....	102, 103, 104, 107, 108
*Baggetto L.G.....	33
*Baitalow F.....	25, 27
*Bajdor K.....	114
Balawender R.....	131, 133
*Balch A.L.....	16, 41
*Bao Y.....	113
*Baran P.....	28
Baranowski B.....	5, 7, 8, 10, 138
*Barcz A.....	70, 71, 74, 75, 87, 88
*Barlak M.....	70, 80, 82, 97, 99
*Bartha E.....	22
*Basińska T.....	20, 22

*Basok S.S.....	12
*Bassarab A.....	79, 96
*Baszkiewicz J.....	70, 71, 74, 75, 87, 88, 93
*Baum H.....	79
*Baumer V.N.....	62, 66
*Bernardi D.....	37
*Bernasik A.....	71
*Besnard C.....	19
*Bessieres D.....	12
Białkowski B.....	119
*Bielańska E.....	71
Bielejewska A.....	12, 17, 24, 28, 33, 35, 45
Bieniasz L.K.....	110, 111
*Bilewicz R.....	121
Biliński A.....	70, 71, 74, 75, 85, 87, 88, 93
*Bizjak T.....	127
*Błazej K.....	78, 79, 81, 82, 86
*Błazej S.....	25
*Bobbo S.....	12, 14, 28
*Bocuzzi F.....	87
*Bocelli G.....	29
*Bohets H.....	113
*Boiko V.....	21, 37
Bok A.....	11, 96
*Bologa O.A.....	29
Bonarowska M.....	61, 65
*Bond G.C.....	64
Borkowska Z.....	102
Borodziński A.....	64
*Borowiak T.....	113, 118, 119
Borowicz P.....	113, 114, 115, 116, 120
*Boszczyk W.....	118
*Botschwina P.....	124
*Bourée F.....	6
*Bourosh P.N.....	29
*Boyer S.A.E.....	25, 31
*Boyko V.....	12, 28, 29, 37
Bronikowski T.....	64
*Brud A.....	25
*Brutschy B.....	124, 128
*Buckley B.R.....	104
*Bulman Page P.C.....	103, 104

*Buma W.J.	123, 125, 129
Burtovyy R.	6
*Bury W.	17, 18, 31

C

*Camporese R.	12, 14, 28
*Caraman G.B.	22
*Cecillon S.	13, 28
*Celzard A.	63
*Cernansky M.	76
*Chaładaj W.	17
*Chang C.Y.	18
*Chang Y.C.	38
*Chausse A.	103
*Chaussé A.	108
*Chen C.D.	15
*Cherenok S.	15, 24, 26, 29, 43, 44
Chernyayeva O.	76, 81, 97
*Chirvony V.S.	127
*Chmielewski M.	70
*Christensson N.	117
*Chuiko A.	118
*Chyla A.	116
Ciach A.	48, 49, 51, 52, 53, 54
Cieślak D.	60
Cieślak M.	98
Cinal M.	132, 134
*Coleman A.W.	13, 28, 33, 36
*Corvaro F.	25
*Costes J.-P.	13
*Croitoru L.	12
Cukrowski A.S.	56, 59
Cybulski A.	135, 136, 140, 141
Cybulski O.	49, 53
Czerwieniec R.	114, 120
*Czerwiński A.	31

Ć

*Ćwiek J.	79, 88
*Ćwil M.	88

D

*D'Souza F.....	13, 17, 33, 34, 35, 37
*Dahan F.	13
*Dan D.	25
*Dan F.	27
*Danel A.....	118
Danylyuk O.	12, 13, 21, 28, 29, 33, 36, 37
*Daridon J.-L.	12
*De Stefani V.	14
*Defossefont G.....	25
*Delaplane R.G.	10
Demyanchuk I.	49, 50
*Denys R.V.	10
*Desbat B.	34, 35
Dębowska L.....	5, 7, 8
*Di Caprio D.	102, 103, 105
*Di Nicola G.	13, 14, 25, 29
*Dicko A.	37
*Dietrich S.....	52, 53
*Dinadayalane T.C.....	131, 133
*Do D.D.	51
Dobkowski J.....	114, 116, 120, 124, 127, 129, 141
*Dobrowolski J.	114
Dodziuk H.	131, 132, 133, 134, 137
Dolata M.....	74
Dolgonos G.	22
*Domańska-Żelazna U.....	29, 35
*Domżałicki P.	71, 88
Dorogova M.	6, 9
*Dranka M.....	18
*Drelinkiewicz A.	71, 88, 99
*Drobizhev M.	114, 117
*Drzewiński A.....	52
*Duca G.G.....	21
Dudek D.	5
*Dupont N.	33
Duszczyk K.	12
Duś R.....	56, 57, 59, 60
*Dutkiewicz G.....	113, 118, 119
*Duus F.	121, 122
*Dygas J.R.....	61, 62, 66
*Dymitrowska M.....	103

*Dzenis Y.....	114
*Dziembowska T.....	115, 120

E

*Edolfa K.	98
*Edvinsson Albers R.....	135, 136
*Efimov O.N.	16
*Elżanowska H.....	31
*Enright G.D.	38
*Eremenko A.....	118, 120
*Everaert J.....	113

F

*Farace G.	32
*Fedele L.....	12, 14, 28
*Fernandez-Varea J.M.	89
Fiałkowski M.....	49
Filipek S.M.....	5, 6, 7, 8, 9, 10, 141
*Fita P.....	115, 120
*Fleisher M.....	98
Flis J.	71, 72, 75, 84, 89, 93, 100
Flis-Kabulska I.	72, 84, 89
*Fonari M.S.....	12, 21, 29
*Fontaine M.L.....	62, 64
Fraś Z.....	15
*Freysingéas E.....	52, 53, 54
*Fuerstman M.J.....	50, 52
*Furdin G.	63
*Furmaniak S.	49

G

*Gadde S.	34, 35
*Gadomski W.....	119
*Gaft T.	118
*Gaillon L.....	103, 104, 106, 107
Gajek A.....	72, 90
*Ganin E.V.....	12, 16, 21
*Ganin Ed.V.....	29
*Gapiński J.....	50
Garstecki P.	50, 52, 54
*Gauden P.A.	49, 51
Gawinkowski S.	114, 121, 124

*Gdanec M.	29
*Gdaniec M.	21
*Gebert A.	92
*Gedeon O.	83, 85, 94
*Geerlings P.	131
*Geise H.J.	113
*Gelmboldt V.O.	12, 29
*Gerbeleu N.Y.	29
*Gergely G.	72, 79, 84, 85, 90, 94
Gibała U.	72, 90
Gierycz P.	11, 14, 15, 16, 19, 23, 25, 30, 31, 35, 37, 41, 42, 140
Gil A.	121
*Giuliani G.	13, 14, 29
*Gliński M.	61
*Glowacka A.	83
*Głód B.K.	11, 12, 27
Gmachowski L.	62, 64, 67
*Gonta M.V.	21
*Gorb L.	131, 133
*Görlich E.A.	62
Gorski A.	115, 121, 122
*Gorton L.	31
Góral M.	11, 69, 73, 78, 79, 81, 82, 86, 90, 96, 100
*Górecka J.N.	56, 57, 58
Górecki J.	56, 57, 58, 59, 60
Gózdź W.T.	50, 53
*Grabka D.	118
Grabowska A.	115, 120
Grabowski Z.R.	137, 138
*Gracia M.	69, 70
Gregorowicz J.	15, 25
*Grolier J.-P.E.	25, 27, 31
*Gronowski M.	124
*Groszek G.	25
*Grymel M.	19
Grzeszczak-Kołodys P.	60
*Gurban S.	72, 79, 84, 90
 H	
*Hansen B.K.V.	121
*Hansen B.V.	122
*Hansen J.S.	58

*Hansen P.E.	121, 122
*Harbola M.K.	133
*Harnau L.	50
*Hartschuh A.	116
*Hasik M.	71
*Haulait–Pirson M.–C.	78, 79, 81, 82, 86
*Haupt K.	32
*Havela L.	9
*Hayman C.M.	103, 104
*Hefter G.T.	78, 79, 81, 82, 86
Herbich J.	117, 124, 128, 138, 141
*Hnatejko Z.	115, 116
*Hofman M.	90
Holas A.	132, 133, 134
Hołyst R.	48, 49, 50, 51, 52, 53, 54, 55, 138, 141
*Horeglad P.	18, 32
*Hrnčír T.	80, 96
*Hsiou Y.F.	15
*Huang J.C.	40
*Hughes K.	80
*Hung C.H.	18

I

*Idakiev V.	87
*Igarashi Y.	57
*Ilczuk J.	77
*Ilieva L.	73, 91, 98
*Ito O.	35
*Izydorzak M.	45

J

Jabłoński A. 72, 73, 74, 76, 79, 80, 81, 83, 84, 85, 87, 89, 90, 91, 92, 93, 94, 96, 100, 101, 138, 141	
*Jagielski J.	70
*Jamróz M.H.	114
Janik-Czachor M.	74, 80, 82, 85, 92, 97, 99
*Jankowski A.	116
*Jaroniec M.	51
*Jaskiewicz A.	74, 82, 99
*Jaszuński M.	132, 134
*Jiricek P.	73, 74, 76, 85, 86, 87, 94, 100
*Johannessen C.	115

*Jóźwik A.....	75, 83, 85, 86, 94
*Jóźwik J.....	136
*Jurczak J.....	16, 17, 136
Justyniak I.....	17, 18, 31
Juszczuk W.....	63, 66, 67
*Jwo C.S.....	40

K

*Kaczmarzski K.....	11, 27
*Kadinov G.....	98
*Kalchenko O.....	15, 28, 43, 44
*Kalchenko V.....	12, 15, 21, 24, 26, 28, 29, 37, 43, 44
*Kalchenko V.I.....	33, 35, 39, 47
*Kaliński D.....	70
*Kamieńska-Duda A.....	28
*Kamieński J.....	116
*Kammerer J.....	58
*Kaneko K.....	51
Kanoza M.....	72, 84, 89
*Kao W.S.....	34, 40
*Kapteijn F.....	135, 136
Kapturkiewicz A.....	113, 114, 115, 119, 120, 122
*Kapuku F.....	78, 79, 81, 82, 86
*Karolak E.....	122
*Karotki A.....	114
Karpiński Z.....	61, 63, 65, 66, 67
Karpiuk J.....	115, 118, 122, 123, 126, 127, 138
*Kasprzycka-Guttman T.....	22
Kaszkur Z.....	17, 33, 57, 62, 63, 64, 66, 67, 68
*Kaszyński J.....	80, 97
Kawczyński A.L.....	58, 59
*Keim E.G.....	57, 59, 60
*Kempinski W.....	80
*Kempiński W.....	97
Kędra-Królik K.....	16, 31
Kędzierzawski P.....	92
*Khanina O.....	120
*Kierdaszuk B.....	119
Kijak M.....	123
*Kleinschmidt M.....	86
*Klimchuk O.V.....	35
*Klimek K.....	31

*Kloc C.....	19
*Kłonkowski A.M.....	115, 116
*Kobiela T.....	57
*Kocańda D.....	74
*Kocańda S.T.....	74
*Kochman A.....	13, 32
*Köhler T.....	115
*Kolbus A.....	56, 59
*Kolomiets A.V.....	9
Kończak J.....	110, 111
Kołodziejczyk E.....	32
Kołos R.....	114, 116, 123, 124, 129
*Komarov V.Yu.....	19, 32
*Konarski P.....	88, 97
Kondrat S.....	50
*Kopec M.....	61
*Kopeć D.....	115, 120
*Kopeć M.....	66
*Kopeć T.....	18
*Korybut-Daszkiewicz B.....	41
Kosiński A.....	84, 85, 88, 92, 93, 94
*Kosior M.....	16
*Kosterin S.....	21, 37
*Koval'chuk I.V.....	10
Kowalczyk P.....	49, 51
*Kowalczyk Z.....	63
*Kowalczyńska H.M.....	116
*Kowalska T.....	11, 27
*Kowalski B.J.....	62
*Kowalski J.....	41
*Kozubowski J.A.....	70, 71, 74, 75, 87, 88, 93
Koźbiał M.....	16, 22, 26, 32, 40
*Kraszewska I.....	18
*Kravtsov V.Ch.....	16, 19, 20, 22
Krawczyk M.....	85, 92, 93
*Kreutzer M.....	135, 136
*Krinichnaya E.P.....	16
*Krok F.....	61, 66
*Krolikowski P.....	59
*Kropyvnyi N.....	76
*Kruk P.....	18
*Krupa D.....	70, 71, 74, 75, 87, 88, 93

*Kubicki J.....	117
*Kubicki M.....	113, 118, 119
*Kubik M.....	118
Kuczyńska M.....	75, 93
Kuczyńska-Wydorska M.....	75, 84, 93
*Kudelski M.....	124
*Kudyba I.....	136
*Kulig K.....	35
*Kurkov S.V.....	26, 33
Kutner W.....	13, 16, 17, 31, 32, 33, 34, 35, 37, 41, 45, 138, 141
Kwaterczak A.....	17, 33
*Kwiatkowski P.....	16, 17
*Kyrychenko A.....	116, 121, 124
*Kyryliv O.....	79, 96

L

*Laberty Robert Ch.....	62
*Laberty-Robert Ch.....	64
*Labko Y.....	120
*Lafitte T.....	12
*Lampeka Y.....	12, 28
*Latroche M.....	8
*Lazar A.....	13
*Lazar A.N.....	33
*Lebiedz D.....	58
*Lee J.T.....	115
Legawiec-Jarzyna M.....	66
*Legendre B.....	25
*Leite L.....	98
*Lemarchand A.....	57, 58
*Lemek T.....	25
Lesiak B.....	73, 75, 76, 80, 83, 84, 85, 86, 87, 94, 96, 100
*Leszczyński J.....	131, 133
*Leś A.....	113, 116
*Lewandowska-Szumieł M.....	74
*Lewiński J.....	17, 18, 31, 32
*Liao C.Y.....	34, 40
*Lin C.K.....	38
*Lin C.R.....	18
*Lin H.M.....	38, 40
*Lin H.-M.....	20

Lipkowski J.	12, 13, 16, 18, 19, 21, 22, 26, 28, 29, 31, 32, 34, 35, 37, 38, 39, 47, 114, 139
*Lis S.....	115, 116, 117
Lisovytskiy D.	61, 62, 66
Lisowski W.....	57, 59, 60
Litniewski M.	57, 58, 60
*Liu R.S.....	6, 8, 9, 10
*Lobko Y.....	114
*Lochbrunner S.....	118, 123, 127
*Lubomska M.....	19
Luboradzki R.....	19, 21, 22, 34, 36, 45
*Lung J.K.....	40
*Luzina E.	115, 120, 124
*Luzina L.	124

Ł

Łomot D.	61
Łunarska E....	71, 74, 76, 77, 79, 81, 82, 83, 88, 94, 95, 96, 97, 98, 101, 139
Łuszczuk M.	15

M

*Maciejewska E.	63
Maciołek A.	48, 52, 53, 55
*Mackay D.	86
*Mahmoud R.....	19
*Makaiev S.Z.	21, 36
*Makowski M.	99
*Makowski W.	88
Malanowski S.K.....	29, 37, 139
*Malawska B.....	35
*Malinowska M.....	17
*Malinowski S.T.....	21, 36
*Manakov A.Yu.....	38
*Manzoli M.	73, 87, 91, 98
Mańkowski J.	72, 78, 89, 96
Maranda-Niedbała A.....	59
*March N.H.....	132, 133
Marchuk I.	6, 7, 8, 9, 10
*Marciniak M.....	29
Marcinowicz A.....	15, 24, 26, 40, 43, 44
Marczak R.	34, 35
*Mareche J.F.....	63

*Marin G.	20
*Marken F.	102, 103, 104, 105, 106, 107
*Marzantowicz M.	62, 66
*Mattes R.	119
*Matysiak D.	49
*Matyszek M.	35
*Mazurek A.P.	114
*Mazurkiewicz J.	20
*Mączyńska Z.	78, 79, 81, 82, 86
Mączyński A.	11, 73, 78, 79, 81, 82, 86, 101
*McCarty A.L.	17, 33, 35
*McKenzie K.J.	102, 103, 104, 105, 106
*Medjahdi G.	63
*Meixner A.	116
*Menyhard M.	72, 79, 84, 90, 94
*Meyers P.A.	86
*Michalak P.	83
*Michalski J.	79
Michalski J.A.	64
*Michaud M.H.	33
Mierzwa B.	62, 63
*Mierzyński J.	74
*Miliyanchuk K.	9
*Mirończuk A.	116
*Miroshnichenko S.I.	35
*Miskiewicz E.	63
Miśkiewicz M.	35
*Miyamoto H.	86
*Miyamoto J.	51
*Mizera J.	71, 74, 75, 88, 93
*Modaressi A.	35
*Molnar A.	80, 85, 92, 97
*Monton J.B.	70
*Morak B.	19
*Moravsky A.P.	16
Mordarski G.	110, 111
Mordziński A.	116, 117, 124
Mosiałek M.	111, 112
*Moudrakovski I.L.	38
*Moulijn J.A.	135, 136, 140
*Mounis T.	62
*Mróz S.	97

*Mudadu M.S.	125, 129
*Murphy M.A.	104, 105, 106
*Mylswamy S.	8, 10

N

*Nagahara H.	57
*Nagels L.J.	113
*Narojczyk J.	79
*Narowski R.	67
*Navaza A.	33
*Négrerie M.	127
*Nehasil V.	80, 96
*Nickel B.	114, 120
Niedziółka J.	103, 104, 105, 106, 107
Nikiforow K.	76, 77, 79, 88, 95
Nosenko Y.	124, 128
*Novitchi G.	13
*Nowacki J.	113, 114, 115, 122, 128
Nowakowski B.	57, 58, 59
Nowakowski R.	17, 33, 34, 35, 56, 59, 60, 84, 103, 105, 106
*Nowak-Wyrzykowska M.	116
Nowicka E.	56
*Noworyta K.	34, 35
*Nykyforcyn H.	79, 96
*Nykyforczyn H.	77, 95

O

*O'Dell E.S.	13
*Obłąkowska D.	111
*Ochal Z.	18
*Ogienko A.G.	38
*Ohmori T.	51
*Olesińska W.	70
Olszewski S.	133, 137, 141
Opalło M.	102, 103, 104, 105, 106, 107, 108, 109, 141
*Oracz P.	11, 96
Orłowska M.	21, 45
*Orosz G.T.	79, 84
Orzanowska G.	115
*Ossowski M.	77, 95
*Oswald P.	52, 54
*Owczarek E.	80

*Owczarek I. 78, 79, 81, 82, 86

P

*Pacetti M.....	25
*Pajak M.....	88
*Pakulski Z.....	19, 34
Palasyuk T.....	6, 9
*Pałys B.....	103, 104, 105, 106, 107
*Panarin A. Yu.....	127
*Pârvulescu A.N.....	20
*Pârvulescu V.....	20
*Pârvulescu V.I.....	20
Pasiuk-Bronikowska W.....	63, 64
*Paszkowicz W.....	62
*Paul-Boncour V.....	6, 7, 8, 9, 10
*Pavluch J.....	80, 96
*Pawlak K.....	52, 54
Pawłowska S.....	41
*Pekárek Z.....	80, 96
*Peng B.X.....	113
*Penn D.R.....	81
*Percheron-Guégan A.....	6, 7, 8
*Perlovich G.L.....	24, 26, 33
*Perret F.....	36
*Peszke J.....	38
*Petkova I.....	125, 129
*Piątkowski P.....	115, 120
*Piekara-Sady L.....	80
*Piekoszewski J.....	70, 79, 80, 97
Pielaszek J.....	61, 62, 63, 64, 66
*Pieniek T.....	88
Pietraszkiewicz M.....	113, 115, 116, 117, 118, 119, 121, 125, 126, 128
Pietraszkiewicz O.....	113, 117, 118, 119, 121, 126
Pięta P.....	17, 33, 35, 37
Pisarek M.....	80, 82, 85, 92, 97, 99
Piwoński H.....	116, 126, 128
*Pluta K.....	19
*Polaczek E.....	20
*Polonara F.....	13, 14, 29
*Polyak Y.....	80, 96
Poniewierski A.....	48, 50
*Posokhov Y.....	121

*Potmesil J.	83
*Powell C.J.	73, 74, 80, 81, 85, 89, 91
Poznański J.	15, 16, 20, 24, 26, 32, 36, 43, 44
*Prokert F.	80
*Puricelli S.	63
Pyrża J.	76, 95

R

*Rac B.	80, 92, 97
*Rachwalska M.	58
Raczko J.	98, 136
*Radecka H.	117
*Radul O.M.	21, 36
Radzewicz C.	115, 117, 119, 120, 126, 127
*Rajchel B.	70, 71, 74, 75, 87, 88
Randzio S.L.	12, 21, 25, 27, 31, 36, 45, 46
*Rarog-Pilecka W.	63
*Ratajska-Gadomska B.	119
*Ratcliffe C.I.	38
*Rather B.	13
*Rebane A.	114, 117
*Reichl Ch.	7
*Reisfeld R.	118
*Religa P.	37
*Rialdi G.	25, 26
*Ricci R.	14
*Richter E.	80
*Riedle E.	118, 123, 127
*Ripmeester.	38
*Rode J.E.	114
*Rodik R.	12, 21, 28, 37
*Rodionova T.V.	19, 32
*Rogalski J.	105
*Rogalski M.	19, 35, 37
*Rogers L.M.	13
*Rok Ł.	97
Roliński T.	133
*Romański J.	136
Rotkiewicz K.	118, 120, 129
*Roussel C.	22
Roźniecka E.	103, 104, 105, 106, 107
*Rubio A.	132

Rudziński K.J.	65, 66, 67
Ruggiero M.	110, 111
*Rychlicki G.	49
*Rycombel J.	116
*Ryumshyna T.	81, 97

S

Sadkowski A.	81, 98, 101
*Safar M.	37
*Salvat F.	74, 80, 81, 89, 91
*Samal P.	133
*Samatowicz D.	77
*Saraidarov T.	118
*Sartowska B.	19, 70
*Sato R.	8
*Saunier J.	103
*Sazanovich I.	129
*Sazanovich I.V.	120, 127
Sączek-Maj M.	103, 106, 107
*Scattolini M.	12, 14, 28
*Schilf W.	132, 134
*Schiltz M.	19
*Schmidhammer U.	127
*Schneider H.J.	22
*Schumacher A.L.	37
*Seidel D.	115
Sepioł J.	116, 119, 124, 126, 127, 128
*Serbinski W.	83
*Sessler J.	128
*Sessler J.L.	115, 121
*Shaik O.S.	58
*Shaw D.G.	78, 79, 81, 82, 86
*Shiu W.Y.	86
*Shlykov S.	21, 37
*Shopska M.	98
*Shova S.	13
*Shtereva I.	98
*Shugar D.	119
Shul G.	102, 103, 104, 105, 106, 107
*Siegrist T.	19
*Simonov Yu.A.	12, 16, 19, 21, 22, 29
*Sirieix-Plenet J.	103, 104, 106, 107

Skórka M.	21, 27, 38
Skrzecz A.	69, 70, 78, 79, 81, 82, 86
*Slinchenko N.	21, 37
*Słoma J.	82
*Słomka Z.	75, 93
*Słomkowski S.	20, 22
*Słowik K.	37
*Smekal W.	81
*Smirnov I.V.	35
*Smirnova N.	120
*Smirnowa N.	118
*Smithers M.A.	57, 59
*Smolik J.	75, 93
*Sobczak E.	71
Sobczak J.W.	16, 17, 33, 63, 70, 71, 73, 74, 75, 85, 87, 88, 90, 91, 92, 93, 98, 99
*Sobolewski A.	129
*Sobolewski A.L.	117, 127
*Sokolov I.E.	21
*Solarz L.	51
*Soldatov D.V.	21, 38
*Solimando R.	19, 37
*Solovyov A.	15, 43, 44
*Spanget-Larsen J.	115, 121, 122
*Spangler C.W.	117
*Spasov L.	98
*Spivak L.	76, 98
*Stabryła J.	77, 82, 95
Stafiej J.	102, 103, 104, 105, 107, 108, 109
*Staniński K.	117
*Stanisławski J.	80, 97
Staniszewski K.	49, 50
*Stankowski J.	80, 97
*Starczewski L.	77, 82, 95
*Starkowski S.	34
*Starowieyski K.B.	18
*Starukh G.	118
Stecki J.	51
*Stejskal J.	88
*Stell G.	49, 53
Stepanenko Y.	114, 115, 116, 117, 118, 127
Stobiński L.	15, 18, 20, 34, 38, 40, 46

*Stolecki K.....	63, 67
*Stonkus V.....	98
Stryjek R.....	12, 13, 14, 25, 28, 29
*Stupperich C.....	116
*Styrcz S.....	118
*Su B.-L.....	73, 91, 98
*Su C.H.....	18
*Sugiura H.....	7, 8
*Sulikowski D.....	119
*Sulyok A.....	84, 85, 90, 94
Suski L.....	110, 111, 112
Suwińska K.....	12, 13, 19, 20, 21, 28, 29, 32, 33, 36, 37, 38, 39, 46, 139
Svartsov Y.N.....	115, 127
*Swiatnicki W.....	83
*Szafrąński A.....	78, 79, 81, 82, 86
Szafrąński A.W.....	6
*Szalkowska I.....	115, 116
Szeremeta E.....	65, 67
*Szmigiel D.....	63
*Szota K.....	52
Szterner P.....	24, 40, 44
Szydłowska I.....	117, 128
*Szymańska I.....	117
Szymański J.....	20, 22
*Szymański W.....	61
*Szymczyk W.....	79, 80, 99

Ś

*Śliwiński W.....	18
Śrębowata A.....	63, 66, 67
Świerczyński D.....	22, 25, 35, 39, 47
Świerzewski R.....	22, 25, 26, 40

T

Tabaka M.....	53
*Tabakova T.....	87
*Tacikowski J.....	79
*Tacikowski M.....	82
*Tailhades P.....	64
*Taleb A.....	104, 107, 108
*Tanaka H.....	51
*Tanase C.I.....	22

*Tanuma S.....	74, 81, 85, 91
*Tarakeshwar P.....	128
*Taraszewska J.....	22, 41
*Tasynkevych M.....	51
*Taylor P.N.....	114
*Terekhova I.S.....	32
*Terekhova I.V.....	40
*Terzyk A.P.....	49, 51
*Thummel R.P.....	123, 124, 125, 129
*Tien D.C.....	34, 40
Tkacz M.....	6, 9, 10
Tobiś J.....	61, 65
*Tomasik P.....	20
*Tomasik P.J.....	20
*Tomczyk P.....	111, 112
*Toth J.....	90
*Tóth J.....	84, 85, 94
*Tratkiewicz E.....	18, 32
*Trepte J.....	16
Treszczanowicz A.J.....	22
Treszczanowicz T.....	22
*Trung N.T.....	122
*Trybuła Z.....	80, 97
*Tsai T.H.....	40
*Tseng K.H.....	34, 40
*Tsonopulos C.....	78
*Tsung T.T.....	34, 40
*Tsutaoka T.....	8, 9
*Tsybmal I.....	21, 37
*Tsybmal L.....	12, 28
*Tsyurulnyk O.T.....	76

U

*Udachin K.A.....	22
*Umezawa Y.....	117
*Uncuta C.....	22
Urbańska N.....	128
Utzig E.....	16, 26, 32, 36

V

*Vadgama P.....	32
*Vajda P.....	6

*van den Berg A.H.J.	57, 59
*Vanecek M.	83
*Vanthuyne N.	22
*Varga D.	84, 85, 90, 94
*Vautrin-UI C.	108
*Vdovin A.	128
*Verelst M.	64
*Vogel E.	121

W

*Wach P.	79
*Wachowski L.	90
*Waksmundzka A.	88
*Waksmundzka-Góra A.	99
Waluk J.	113, 114, 115, 116, 118, 120, 121, 122, 123, 124, 125, 126, 128, 129, 130, 140
*Watson Kuo.	15
Wawrzyniak M.	40
*Weber E.	16
*Weibel D.B.	52
*Werner W.S.M.	81, 87, 100
Werner Z.	70, 74, 79, 80, 82, 97, 99
*Wesołowski R.P.	49
*Whitesides G.M.	50, 52
Wieczorek S.A.	52, 53, 54
*Wierzbicki R.	8, 10
*Wierzchoń T.	77, 82, 95
*Wierzchowski J.	119
*Wiesinger G.	7
*Wilcox G.D.	104
*Winkler K.	16, 41
Wiosna G.	129
Wiśniewska-Gocłowska B.	11, 73, 78, 79, 81, 82, 86, 90
*Wnuk P.	127
Wolarek Z.	82, 87, 99
*Wolf G.	25, 27
*Woźniak R.	18
*Wójcik K.	18
*Wrzalik R.	20
Wszelaka-Rylik M.	20, 26, 44
*Wyrwa J.	110, 111

Y

*Yakovenko A.....	28, 29
*Yang H.D.....	8, 10
*Yang Y.J.....	15
*Yavolovskii A.A.....	21
*Yoshikawa K.....	57
*Young C.L.....	78, 79

Z

*Zaborski S.....	77, 82
*Zaborski St.....	77
*Zachara J.....	18
Zakroczymski T.....	72, 80, 82, 83, 87, 89, 90, 99, 100, 101
*Zandler M.....	34
*Zandler M.E.....	35
*Zavaliy I.Yu.....	10
*Zawisza I.....	105
*Zaworotko M.....	13
*Zbaraża E.....	11, 27
*Zemek J.....	73, 74, 76, 83, 85, 86, 87, 94, 100
Ziajka J.....	63, 65, 66
Zielenkiewicz A.....	23, 27, 42, 44
Zielenkiewicz W....	11, 15, 20, 22, 23, 24, 25, 26, 27, 33, 36, 40, 42, 43, 44, 142
Zielińska A.....	128
*Zieliński A.....	83
Zieliński J.....	63, 67
Zięba K.....	41
Zięborak-Tomaszkiewicz I.....	23, 27, 41, 42, 140
*Ziomek-Moroz M.....	84, 100
*Ziółkowska I.....	63
Ziółkowski D.....	63
*Znak L.....	63, 67
*Zommer L.....	80, 85, 87, 93, 96, 100
*Zych A.....	78, 96
*Zych E.....	97

Ż

Żółtowski P.....	104, 105, 108
*Żukowski J.....	12, 21, 24, 35
Żurek S.....	111, 112
Żywociński A.....	52, 54

