HR EXCELLENCE IN RESEARCH

NARODOWE CENTRUM NAUKI

Warszawa, dnia...06.09.2018....

"ICHF 17/2018"

Department of Photochemistry and Spectroscopy.

PhD scholarship position

- **Job title:** PhD scholarship
- **Job summary**: PhD scholarship positions available in the Institute of Physical Chemistry PAS within National Science Center OPUS 13 Project No. 2017/25/B/ST4/01109 entitled "Microfluidic SERS-based analysis of circulating tumor cells (CTCs) from blood samples - new diagnostic approach for "liquid biopsy". (leader dr hab Agnieszka Kamińska, prof. PAN).
- **Job Description**:
  The main goal of the presented project proposal is development of a novel, unique and highly sensitive recognition unit using surface - enhanced Raman spectroscopy (SERS) for circulating tumor cells (CTCs) studies. We will investigate four different cells: (i) leucocytes and circulating tumor cells of (ii) breast carcinoma tumor cells (MDAMB 231, MCF7); (iii) lung tumor cells (NCI- H23,NCI- H1299); and (iv) prostate tumor cells (Myc CaP, VCaP) from blood samples. During the project a novel SERS-active substrate based onto membranes and polymer mats (MSP) that permit simultaneous: (i) the separation and enrichment of CTCs from complex blood samples, and (ii) the enhancement of CTCs Raman signals after theirs covering by Ag/Au thin layers will be developed.

  Responsibilities:

  The successive candidate will be responsible for:
  1) SERS-active nanostructure preparation and their characterization via microscopic techniques such as STM, AFM and SEM.
  2) Preparation of the Raman reporter probes.
  3) Modification of SERS–active nanostructures by suitable linkage molecules for selective immobilizations of tumor cells immune, antibodies, and Raman reporters
  4) Test and validation of the developed SERS- based CTCs sensor on the real clinical samples in cooperation with medical partners

- **Nr of positions available:** 1

- **Main Research Field:** Chemistry,.
- **Career Stage:** M.Sc. degree
- **Research Profile:** (First Stage Researcher) R1
- **Benefits:** We offer a PhD scholarship position (full-time employment) in the Institute of Physical Chemistry PAS with net pay) salary in the amount of around 4000 PLN per month financed from the NCN OPUS 13 Project No. 2017/25/B/ST4/01109 The position is initially for a period of 36 months and will be awarded in accordance with the regulations defined by the National Science Center regarding the rules for awarding and paying NCN scholarships.

- The successful candidate is expected to start work within the project no later than on **November 2th , 2018.**
- **Career perspectives:** The PhD scholarship will have the opportunity to work in interdisciplinary research department and participate in a very attractive scientific project focused on practical applications of SERS technique in biomedical and analytical trails.
- **EU Research Framework Programme (mandatory):** No
- **Employment policy of the Institute of Physical Chemistry PAS:** http://ichf.edu.pl/employment_policy.pdf
- **Job Details**
  - **Type of contract:** temporary
  - **Status:** full-time
  - **Hours Per Week**: 40
- **Application Details**
  - **Envisaged Job Starting Date:** November 2th, 2018
  - **Application Deadline:** October 15th, 2018, 23:59.
  - **How to Apply:**
    Send application directly to rekrutacja@ichf.edu.pl, **IMPORTANT** email title has to be "**ICHF 17/2018**"

- **Required Education Level**
  - **Degree:** M.Sc. degree
  - **Degree Field:** physics, chemistry;
- **Required Languages:** English
  - **Language level:** good
- **Required Research Experiences**
  - **Main Research Field:** - chemistry
  - **Reserach Sub Field:** - spectroscopy, biochemistry
  - **Years of Research Experience:** - 2-4
- **Additional Requirements**
  1. M.Sc. degree in chemistry sciences,
  4. Knowledge and practical experience with Raman spectroscopy,
  3. Ability to work independently as well as in a group.
  5. Ability to communicate fluently in English (written and spoken).
  6. Strong motivation to work.

Recruitment procedure

• Complete application should include the following items:

a) a job application,

b) a scan or photocopy of the candidate's university degree,

c) curriculum vitae with the list of scientific achievements (publications, patents, conference presentations, etc.),

d) at least one opinion of the candidate from an academics,

e) a copy of language certificate (applicable to candidates from countries other than Poland),

e) consent to the processing of the candidate's personal data for the purposes of the competition http://ichf.edu.pl/RODO_doktorantstypendysta_zgoda_PL_EN.doc (without the consent, application won't be considered in the competition)

f) the candidate's declaration he/she has become acquainted with General Rules Governing Competitions for Research Posts at IPC.

IMPORTANT: applications without these consents will not be considered.

• Employment will take place in accordance with the Employment policy of the Institute of Physical Chemistry PAS (http://ichf.edu.pl/employment_policy.pdf) and the provisions of the competition documentation of the National Science Center (NCN) for the OPUS 13 projects;

• Application deadline is on **15 October 2018**.

• The Commission will take into account the following criteria:

a) competences of candidates for specific tasks in a research project,

b) previous scientific achievements of candidates,

c) awards and distinctions of the candidate resulting from the conducted research.

• Short listed candidates must go through an interview that will be held on **October 22, 2018.** We reserved the right to contact and reply to only selected candidates.

• The results of the recruitment will be announced on **October 31th, 2018**.

• The results of the competition are made public.

• The candidate that does not agree with the results of the recruitment procedure has the right to appeal to the Director of the Institute within 7 days after results were announced.

ZASTĘPCA DYREKTORA
d/s Naukowych
Prof. dr hab. Marek Tkacz