



HR EXCELLENCE IN RESEARCH



NARODOWE  
CENTRUM  
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Warszawa, dnia...06.09.2018...

“ICHF 18/2018”

**Department of Photochemistry and Spectroscopy.**

**Post-doctoral scientist position**

- **Job title:** Post-doctoral scientist – full time employment.
- **Job summary:** Post-doc 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 their covering by Ag/Au thin layers will be developed.

We offer a post-doctoral position (full-time employment) in the Institute of Physical Chemistry PAS with net pay) salary in the amount of around 5000 PLN per month financed from the NCN OPUS 13 Project No. 2017/25/B/ST4/01109 The position is initially for a period of 24 months. The successful candidate is expected to start work within the project no later than on October 15th, 2018.

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) Modification of SERS-active nanostructures by suitable linkage molecules for selective immobilizations of tumor cells immune, antibodies, and Raman reporters
- 3) Development of label-free strategy (intrinsic path) for CTCs detection

- **Nr of positions available:** 1
- **Main Research Field:** Chemistry,.
- **Career Stage:** Recognized Researcher, PhD degree
- **Research Profile:** Recognized Researcher (R2)
- **Benefits:** The successful candidate will be able to take advantage of all programs in the IPC PAS, including Young Scientists of IPC PAS competition and Mobility of Young Scientists of IPC PAS competition. Additionally all benefits of employees of IPC PAS will be granted to the successful candidate, e.g., private health care program.
- **Career perspectives:** The postdoctoral researcher 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](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:** might vary in range from **October 15th, 2018** to **November 1st, 2018** depending on the obligations of the successful candidate.
  - **Application Deadline:** September 30st, 2018, 23:59.
  - **How to Apply:**  
Send application directly to [rekrutacja@ichf.edu.pl](mailto:rekrutacja@ichf.edu.pl), **IMPORTANT** email title has to be **"ICHF 18/2018"**
- **Required Education Level**
  - **Degree:** PhD or equivalents
  - **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. PhD degree in chemistry sciences, obtained no earlier than 7 years before the starting year of the employment in the project (this period might be longer due to family reasons (according to NCN rules)).
  2. Publication record and rich scientific experience.
  4. Knowledge and practical experience with Raman spectroscopy, especially with Surface Enhanced Raman Spectroscopy (SERS) for biological applications.

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) university degree diploma and PhD certificate
  - c) curriculum vitae with the list of scientific achievements (publications, patents, conference presentations, etc.),
  - d) at least one opinion of the candidate from a worldwide reputable academics,
  - e) consent to the processing of the candidate's personal data for the purposes of the competition ([http://ichf.edu.pl/RODO\\_post-doc\\_consent.doc](http://ichf.edu.pl/RODO_post-doc_consent.doc)).
  - f) the candidate's declaration he/she has become acquainted with the General Rules Governing Competitions for Research Posts at IPC, [http://ichf.edu.pl/General\\_Rules\\_Governing\\_Competitions.pdf](http://ichf.edu.pl/General_Rules_Governing_Competitions.pdf)

### **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](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 **30 September 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 5, 2018**. We reserved the right to contact and reply to only selected candidates.
- The results of the recruitment will be announced on **October 10th, 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.

Scheduled date of **starting work** within the Project might vary in range from **October 15th, 2018** to **November 2th, 2018** depending on the obligations of the successful candidate.

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

