Postdoctoral position in the Laboratory of Technology of Novel Functional Materials

Project:

"**BEACs: new allotropic forms of carbon. Synthesis, doping, and electronic and adsorption properties**" within the Sonata Bis grant (2016/22/E/ST5/00529) from the National Science Centre.

The project will be realized in the Centre of New Technologies at the University of Warsaw under the leadership of Dr Andrzej Szczurek (http://ltnfm.icm.edu.pl).

The proposed project having basic research character is focused on fundamental understanding the phenomenon occurring in BEACs, new allotropic forms of carbon. These analogues of graphene are consisted entirely of benzene rings and an acetylenic (graphyne) or diacetylenic (graphdiyne) linkages. Our goals are to **acquire and refine the production** of these materials, as well as increasing efficiency of a synthesis. We aim in investigation of two and three dimensional materials; moreover some of them will be additionally electronically doped or chemically functionalized. That obtained materials will be then investigated in terms of their usefulness in adsorption of **greenhouse gases, GHGs**. We will investigate the capacity, effectiveness, durability and selectivity of pure and doped adsorbents in different adsorption conditions. Last but not least we will investigate the influence of doping on electronic properties of BEACs. We will measure their electrical resistivity as well as the magnetic properties and estimate the **superconductive transition temperature** if applicable.

Requirements:

- Ph.D. degree chemistry or related fields (the applicant must have obtained her/his doctoral degree within the last 3 years, excluding maternity/paternity leave and health leave).
- Documented research experience in chemistry, organic chemistry, physical chemistry, synthesis and characterization of materials;
- In-depth knowledge of computational methods is essential for this position;
- Interest in the subject and motivation to scientific work.

Additional information:

Selected candidates will be asked for reference letters and invited for an interview (live or Skype). Your application should include (in PDF):

- Cover letter.
- Contact details of two referees.
- Scientific CV including your personal data, education, research experience, main achievements, list of publications, and the clause *"In accordance with the personal data protection act from the 29th of August 1997, I hereby agree to process and to store my personal data by the Institution for recruitment purposes";*
- Scan of your PhD certificate, or your master degree certificate with a statement about the foreseen date of PhD thesis defense

- **Conditions of employment:**
- Salary of 85000 PLN (brut) per year for max. 36 months.
- Participation in scientific schools and conferences.

Application deadline: 4th of September 2017

How to apply:

Applications should be submitted to Dr Andrzej Szczurek by e-mail: a.szczurek@cent.uw.edu.pl (**titled BEACs – Post doc**).