



Position available within IDEAS PLUS grant

Concurrent Catalysis in Metal-Organic Frameworks

Position available: post-doc

Number of positions: 1

Institution: University of Warsaw, Faculty of Chemistry, Biological and Chemical Research Centre

Maximal contract duration: 12+12 months

Salary: 4.500 - 6.500 PLN brut

Deadline for application: 28 February 2015

Scientific tasks:

- 1) Synthesis of new organic ligands for Metal-Organic Frameworks (MOFs)
- 2) Immobilisation of homogeneous catalysts inside channels in MOFs and investigation of their catalytic properties in selected model reactions (GC, HPLC, NMR)
- 3) Investigation of parallel and tandem catalysis (one-pot) with new catalytic MOFs.

Accomplishment of the above research tasks will require:

- planning and accomplishment of a number of multi-step organic syntheses (that is: practical knowledge of a broad range of organic transformations, in particular palladium-catalysed reactions, ability to work under anaerobic and anhydrous conditions, ability to conduct syntheses on a milligram to gram scale, as well as sound experience in the purification of organic compounds)
- synthesis and characterization of MOFs from transition metal salts and newly synthesized organic ligands
- selection of model organic reactions for evaluation of catalytic parameters of the synthesized materials and optimization of reaction conditions, followed by studies of kinetics and (enantio)selectivity of the model reactions with the use of GC, HPLC and NMR.

Responsibilities of the successful Candidate will include:

- organisation of a work stand for organic synthesis, (selection, purchase and installation of necessary equipment, materials and compounds, etc.)
- supervision of 2 – 3 graduate and undergraduate students
- documentation of the performed research, reporting and presentation of the results, writing of scientific publications.

Development opportunities in the group:

- participation in preparation of scientific publications and grant proposals
- acquisition of experience in supervision of graduate and undergraduate students
- acquisition of experience and knowledge in the field of organic synthesis, catalysis, MOFs and supramolecular chemistry
- training in the use of modern laboratory equipment (such as GC, HPLC, flash, NMR, PXRD, supercritical dryer, microwave reactor)

We expect from Candidates:

1. PhD in chemistry (preferentially in the field of MOFs, homogeneous catalysis, coordination chemistry or supramolecular chemistry), experience in organic synthesis, purification and characterization of organic

compounds

2. Track record of scientific experience (publications, participation in conferences, posters and presentations)
3. Resourcefulness, independence, interest in the research program of the group, high motivation for scientific work, creativity, responsibility, good organization, capability to work as a part of the team
4. Excellent knowledge of English language

Work place:

Modern, well-equipped research laboratories in the newly constructed building of the Biological and Chemical Research Centre of the University of Warsaw (part of the Faculty of Chemistry)

For more information go to www.mchmielewski.pl

Requested documents:

1. CV (with list of publications)
2. Copy of PhD Diploma
3. Motivation letter
4. Two recommendation letters

Project leader:

Dr Michał Chmielewski, (www.mchmielewski.pl)

Address for sending application: mchmielewski@chem.uw.edu.pl

Please, include subsequent clause in the application documents:

„Hereby, I agree to process my personal data included in this application for the present recruitment procedure, according to the Protection of Personal Data Law of 29 August 1997, of Republic of Poland, Journal of Laws number 133 position 883.

We reserve the right to contact selected Candidates only.