Palacký University
Olomouc

Olomouc 28.08.2023

The Director of Czech Advanced Technology and Research Institute announces a selection procedure for the job position of

POST-DOC RESEARCHER POSITION IN THE FIELD OF: Graphene Derivatives

Research Field: Graphene Derivatives and other Advanced Materials towards Applications
Number of Posts: 1
Researcher Profile: R2
Programme/Project name: HORIZON RIA Project “2D-BioPAD"
Department/Facility: CATRIN
Type of contract: Fixed-term contracts
Job Status: Full-time
Hours per Week: 40
Location: Olomouc
Offer Starting Date: After an agreement

Department/Facility description

We announce the opening of a new position for scientists experienced in the field of (nano)materials with focus on the synthesis and applications of graphene and its derivatives.

The research program: The position is connected to the HORIZON RIA Project “2D-BioPAD; Supple Graphene Bio-Platform for point-of-care early detection and monitoring of Alzheimer’s Disease”. The successful candidate will be at the forefront of designing and producing functional graphenes and Janus graphenes. These materials will be integrated with substrates and conjugated with (bio)molecules. The candidate will interact with the consortium partners and work towards tuning the properties and successful integration of the graphene derivatives in diagnostic devices with the goal of improving their performance. The synthesized materials will be thoroughly characterized with miscellaneous in-house techniques and tested in electrochemical set-ups. The applicant will become part of a focused and motivated international team with state-of-the-art equipment (*see* https://www.rcptm.com/business/analytic-services/).

Job Profile

The successful applicant will:

- Lead the design and synthesis of advanced materials, with a primary focus on graphene derivatives.
- Conduct thorough screening and testing of prepared graphene derivatives and hybrid materials in alignment with the mentioned applications.
- Collaborate seamlessly with RCPTM and project consortium members.
- Actively participate in meetings, share findings, and contribute to reports compilation.
- Demonstrate excellence in manuscript writing.

Requirements

Qualifications:

The applicants must hold a PhD in the fields of chemistry, materials science, chemical engineering or relevant.

What we offer

What we offer:

- motivational salary conditions
- background of one of the largest employers in the Olomouc region
- opportunities for professional and personal development
- 30 days of vacation
- meal allowance, pension contribution and many other employee benefits

Documents requested

- CV in English

If you are interested in this position, please, fill in the contact form and attached the requested documents no later than 30.09.2023.

Contact person

Bakandritsos Aristeidis, Ph.D., a.bakandritsos@upol.cz, +420585634950

Additional Information

Other Information:

RCPTM employees join in Social Insurance (Health insurance, Employee's pension insurance, and Employment insurance).
The salary will be discussed during the interview process.
Performance-based bonus apply.
Submit an curriculum vitae: **a.bakandritsos@upol.cz with e-mail title** POST-DOC RESEARCHER POSITION
2 recommendation Letters will be requested when a candidate is in the final selection stage (i.e. after the interview).

Submission deadline: September 30

Selected applicants will be invited for an on-line interview. The positions will be filled when the appropriate applicants are identified.
All applications are considered, but we often cannot respond to each one. We often can only reply to those individuals we seek to set up an interview with.

Relevant References of the team:

- Cheruvathoor Poulose, A.; Medveď, M.; Bakuru, V. R.; Sharma, A.; Singh, D.; Kalidindi, S. B.; Bares, H.; Otyepka, M.; Jayaramulu, K.; Bakandritsos, A.; Zbořil, R. Acidic Graphene Organocatalyst for the Superior Transformation of Wastes into High-Added-Value Chemicals. **Nat Commun**, 14 (1), 1373, 2023.
- Flauzino, J. M. R.; Nalepa, M.-A.; Chronopoulos, D. D.; Šedajová, V.; Panáček, D.; Jakubec,

P.; Kührová, P.; Pykal, M.; Banáš, P.; Panáček, A.; Bakandritsos, A.; Otyepka, M. Click and Detect: Versatile Ampicillin Aptasensor Enabled by Click Chemistry on a Graphene–Alkyne Derivative. **Small 2023**, 2207216.

- Šedajová, V.; Bakandritsos, A.; Błoński, P.; Medveď, M.; Langer, R.; Zaoralová, D.; Ugolotti, J.; Dzíbelová, J.; Jakubec, P.; Kupka, V.; Otyepka, M. Nitrogen Doped Graphene with Diamond-like Bonds Achieves Unprecedented Energy Density at High Power in a Symmetric Sustainable Supercapacitor. **Energy Environ. Sci.**, 15 (2), 740–748, 2022.
- Bakandritsos A, Pykal M, Blonski P, Jakubec P, Chronopoulos DD, Poláková K, Georgakilas V, Cepe K, Tomanec O, Ranc V, Bourlinos AB, Zbořil R, Otyepka M: Cyanographene and Graphene Acid – Emerging Derivatives Enabling High-Yield and Selective Functionalization of Graphene. **ACS Nano**, 11(3), 2982–2991, 2017.
- Tuček J, Holá K, Bourlinos AB, Blonski P, Bakandritsos A, Ugolotti J, Dubecký M, Karlický F, Ranc V, Cepe K, Otyepka M, Zbořil R: Room temperature organic magnets derived from sp^3 functionalized graphene. **Nature Communications**, 8, 14525, 2017.
- Urbanová V, Holá K, Bourlinos AB, Čépe K, Ambrosi A, Loo AH, Pumera M, Karlický F, Otyepka M, Zbořil R: Thiofluorographene-Hydrophilic Graphene Derivative with Semiconducting and Genosensing Properties. **Advanced Materials**, 27(14), 2305-2310, 2015.
- Blonski, J. Tucek, Z. Sofer, V. Mazánek, M. Petr, M. Pumera, M. Otyepka, R. Zboril: Doping with Graphitic Nitrogen Triggers Ferromagnetism in Graphene, **Journal of the American Chemical Society**, 139(8), 3171–3180, 2017.
- Georgakilas V, Otyepka M, Bourlinos AB, Chandra V, Kim N, Kemp KC, Hobza P, Zbořil R, Kim KS: Functionalization of Graphene: Covalent and Non-Covalent Approaches, Derivatives and Applications. **Chemical Reviews,** 112(11), 6156–6214, 2012.

The Palacký University reserves the right not to fill the position in an exceptional case without giving any reason or to cancel the selection procedure.