FORM FOR EMPLOYERS

INSTITUTION: Department of Molecular Physics, Faculty of Chemistry, Lodz University of Technology

CITY: Lodz

POSITION: Postdoc

DISCIPLINE: Chemistry, Material Science, Solid State Physics

POSTED: 25.08.2017

EXPIRES: 17.09.2017

WEBSITE: www.kfm.p.lodz.pl

KEY WORDS: Organic semiconductor; Self-standing organic transistor; Complementary inverter; Flexible electronic; Graphene inks,

DESCRIPTION (field, expectations, comments):

Project description:

This First Team is aiming to develop high performance and flexible complementary inverters based on ultrathin free-standing films that involve a spontaneous phase separation between the polymer dielectric and the organic semiconductor. This approach is considered to reduce the number of production steps of flexible organic/inorganic based transistors. Additionally, thanks to our idea the charge trapping at dielectric/isolator interface will be reduced to minimum. The combination of the self-standing dielectric/semiconductor bilayers composites with printed conductive graphene electrodes will allow to fabricate high performance and flexible complementary inverter and finally logic gates in a new approach opening the door towards low cost processing.

Key responsibilities include:

Due to the high interdisciplinary and advanced character of the planned research, an experienced Postdoc is required. This would allow us to directly initiate the studies without the needed time of project introduction. The researcher will focus on designing and preparing graphene-based inks for inkjet printing of conductive paths on flexible substrates. Additionally, the Postdoc will be involved in Device and System Integration task where the graphene paths will be used as conductive tracks for the complementary inverters.

Profile of candidates/requirements:

Essential:

1. PhD degree in chemistry, material science or related field (obtained not earlier than 1st January 2012);
2. Scientific achievements (the most desirable are in the field of conductive ink, graphene or organic electronics);
3. Experience with fabrication and/or characterization of inorganic/organic conductive materials for flexible electronic application;
4. Team player in an interdisciplinary environment;

5. Good English language skills (written and oral) as required for scientific environment;

We offer:

1. Opportunity to contribute to the exciting and rapidly developing research in flexible electronics;
2. Research appointment starting 1st October 2017, funding guaranteed for 18 months (up to 36 months);
3. Participation in scientific conferences and meetings with world class experts in flexible, organic electronics;
4. Supportive environment and opportunity to realize research ambitions;
5. Employment contract, full-time (7,900 PLN/ Gross - equivalent to ca 1850€)

Required documents:

1. Curriculum vitae (in English) documenting achievements, research stays and other relevant experience (up to 3 pages);
2. Cover letter and motivation for the position (in English);
3. Full list of publications;
4. A brief summary of professional accomplishments, containing concise information about scientific interests and past achievements;
5. Details of at least two individuals willing to provide references for candidate;
6. Scan of the candidate's university degrees;

The application must contain the following statement: "*I hereby give consent for my personal data included in my application to be processed for the purposes of the recruitment process under the Personal Data Protection Act as of 29 August 1997, consolidated text: Journal of Laws 2016, item 922 as amended".*

Documents should be submitted to the leader of the Project, Dr. Tomasz Marszalek

The e-mail address: tomasz.marszalek@p.lodz.pl.

We inform that only selected candidates will be invited for an interview.