Prospective supervisor's form

Name of the superviso Marek Lieder

Academic title: D.Sc. eng.

Orcid ID number: https://orcid.org/0000- 0000-0001-7410-5161

Faculty of Chemistry

Gdańsk University of Technology **Department of** Process Engineering and Chemical Technology

Phone: **+48** 58 347 16 88

E-mail: lieder@pg.edu.pl

Personal web page: https://pg.edu.pl/

Discipline[i] chemical sciences [NCh] none

Optional

Key words (obligatory four key words describing research interests / expertise):

electrochemistry

energy conversion

graphene

carbon-based electrodes

Bibliometric indicators

1. Number of journal publications in WoS/ Scopus 23/26
2. Citations excluding self-citations WoS 278 Scopus 298
3. Hirsch index WoS 8 Scopus 8

1. The number of PhD students who have graduated under your supervision: 2
2. The number of PhD students currently supervised:
   a. within the current doctoral school 1
   b. within doctoral studies (previous system 2
3. Are you currently accepting new PhD students:
   a. Polish *Yes/No* Yes
   b. Foreign *Yes/No* Yes

Prospective supervisor's form

Research interests or topics offered for PhD research (no more than 2000 characters)[ii]

The fields of specialization:
1. applied electrochemistry,
2. electrocatalysis with special emphasis on the developmentand characterization of novel materials for batteries and biofuel cells.
3. corrosion protection with graphene layers
4. Membrane distillation: synthesis new composite materials, fundamental studies

Funding or special equipment needed to carry out a PhD project[iii]:

1. Is funding available for experimental work: *Yes/No/not needed* — Yes
2. Is the equipment needed to complete a PhD project available in your lab/department: *Yes/No/not needed* — Yes

Most important publications – no more than 5 published after 1.01.2018

No	Authors/title/journal	Number of points according to the current list of the Ministry of Science and Higher Education	Publication year
1.	M.K. Rybarczyk and E. Gontarek and M. Lieder and M.-M. Titirici: Salt melt synthesis of curved nitrogen-doped carbon nanostructures: ORR kinetics boost, Appl. Surf. Sci., 2018, 435, 543-551	140	2018
2.	M.K.Rybarczyk and Y. Li and M. Qiao and Y.-S. Hu and M.-M. Titirici and M. Lieder: Hard carbon derived from rice husk as low cost negative electrodes in Na-ion batteries, J. Energy Chem., 2019, 29, 17-22	100	2019

Prospective supervisor's form

3.	E. Gontarek and F. Macedonio and F. Militano and L. Giorno and M.Lieder and A. Politano and E. Drioli and A. Gugliuzza, Adsorption-assisted transport of water vapour in super-hydrophobic membranes filled with multilayer graphene platelets, Nanoscale, 2019, 11, 11521-11529.	140	2019
4.	K. Ollik and M. Rybarczyk and J. Karczewski and M. Lieder, Fabrication of anti-corrosion nitrogen doped graphene oxide coatings by electrophoretic deposition, Appl. Surf. Sci., 2020, 499, 143914.	140	2020
5.			

Most recent externally funded projects you were involved in – no more than 3

No	Project title, the name of the Principal Investigator (PI) and the institution the project was carried out	Years	Role in the project [iv]
1.			PI
2.			PI
3.			PI

Prospective supervisor's form

Additional relevant information – (no more than 1600 characters)[v]

[i] You may select up to two disciplines out of 12 disciplines represented in the Doctoral School

[ii] Observe the limit of not more than 2000 characters

[iii] Leave only one answer

[iv] Select the role in the project: PI stands for principal investigator (refers to the holder of an independent grant and the lead researcher for the grant project), Co-I for co-investigator (Co-I assists the principal investigator in the management and leadership of the research project), R for researcher

[v] Add any other relevant information e.g. awards for PhD students whom you supervised (no more than 1600 characters)