



Instytut Katalizy i Fizykochemii Powierzchni
im. Jerzego Habera
Polskiej Akademii Nauk



HR EXCELLENCE IN RESEARCH

KSN 5/2020

Kraków, 24.07.2020

ASSISTANT PROFESSOR in the Catalytic Processes for Clean Energy

- Employer: Jerzy Haber Institute of Catalysis and Surface Chemistry Polish Academy of Sciences, Krakow, Poland
- Research field:
 - Chemistry> heterogeneous catalysis
 - Chemistry> instrumental techniques
- Researcher profile: R2
- Deadline for applications: 31.08.2020, 15:00 GMT+1
- Place: Poland, Kraków
- Type of Contract: at least 12 months
- Job Status: Full-time
- Working hours/week: 40
- Start of employment: 1.11.2020

Jerzy Haber Institute of Catalysis and Surface Chemistry PAS invites applications for an ASSISTANT PROFESSOR in the CATALYTIC PROCESSES FOR CLEAN ENERGY group.

The candidates who meet the conditions stated in the act “Ustawa o Polskiej Akademii Nauk” dated 30 April 2010 (Dz.U. 2018 poz. 1475 z póź. zm.), art 89. Ust. 5 for the position of assistant professor are encouraged to apply for the position.

The Candidate will take part in research conducted by the group of CATALYTIC PROCESSES FOR CLEAN ENERGY, which includes the tests of catalytic reactions (mostly hydrogenation), preparation and characterization of supported catalysts consisting of noble metals nanoparticles.

In particular the assistant professor will be responsible for:

- The examination of catalytic hydrogenation in the three-phase system including reaction with carbonyl reactants.

ul. Niezapominajek 8, 30-239 Kraków, Polska
tel. +48 12 639 51 01, +48 12 425 19 23
fax +48 12 425 19 23

Nr konta: Bank Gospodarstwa Krajowego
PL 36 1130 1150 0012 1186 5820 0004
NIP: 6750001805, REGON: P-000326351



- The examination of supported catalysts with mono- and bimetallic noble nanoparticles (Pd, Pt, Ir, Ru, Re, Au).
- Characterization of texture and morphology of catalysts as well as the properties of metallic phase (nanoparticles size, dispersion, lattice parameter) using the following techniques: X-ray diffraction XRD, photoelectron spectroscopy XPS, thermoprogrammed reduction TPR, chemisorption of CO and H₂, electron microscopy SEM, TEM, HRTEM, energy dispersive spectrometry EDS, Fourier transform infrared spectroscopy FTIR.

Required education:

PhD degree in chemistry, materials science or related fields.

Skills/Qualifications:

- 1) Scientific achievements including publications from JRC list and conference presentations.
- 2) At least 6 months (24 weeks) post-doc experience in the institution(s) different from that where the Candidate received PhD

The experience in (proven by publications from JCR list):

- 3) The study of catalytic hydrogenation in the three-phase system (gas/liquid/solid) in particular hydrogenation in the liquid phase; the chromatographic analysis of reaction products.
- 4) The correlation between catalysts properties and activity, selectivity, and stability in the catalytic reactions.
- 5) Preparation of supported monometallic (e.g. Pd, Pt, Ir, Au, Ru, Re), and/or bimetallic (e.g. PdAu, PdIr, PdPt, PdRu) catalysts by conventional and colloidal methods.
- 6) Characterization of textural properties (morphology, surface area, porosity) and acid-base properties.
- 7) Characterization of metallic nanoparticles based on techniques: X-ray diffraction XRD, photoelectron spectroscopy XPS, thermoprogrammed reduction TPR, chemisorption of CO and H₂, electron microscopy SEM, TEM, HRTEM, energy dispersive spectrometry EDS.



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Specific requirements

1. An application.
2. Consent to the processing of personal data for the needs necessary to carry out the recruitment process in accordance with the Act of 29 August 1997 on the protection of personal data (t.j. Dz. U. z 2016 r. poz. 922, z 2018 r. poz. 138, 723.) and fill in the form „Consent to the processing of personal data” confirming acquainting with its content. The form is available on the institute website [\[FORM\]](#).
3. A copy of PhD scientific degree certificate.
4. Full CV (including information on maternal leaves, voluntary work and periods of work in the industry).
5. At least one opinion on the Candidate given by an independent researcher.
6. List of scientific achievements (scientific papers, patent, patent applications, grants, etc.).
7. The Candidate’s report on his/her scientific interests and research aims (an A4 page).

Languages

Fluent in written and spoken English.

Research experience

The experience in catalytic reactions, preparation and characterization of supported catalysts containing noble metal nanoparticles.

Additional information:

Remuneration:

The gross salary will be at least 4680 PLN/month depending on the Candidate’s experience.

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Eligibility criteria:

- PhD degree in chemistry, materials science or related fields.
- Research experience documented by scientific publications in journals enlisted in JCR or patents
- Scientific post-doc experience in the institution(s) other than the institution where PhD studies were completed (minimum 6 months/24 weeks).

Selection process

Applications should be sent in the electronic form to: ncikifp@cyf-kr.edu.pl with the subject title „Adjunct-Procesy-Katalityczne KSN 5/2020”

Deadline for applications: **31.08.2020** at **15:00** GMT+1. The competition will be settled by 30.09.2020. The candidates will be notified of the results. The employment will be proceeded with accordance to the rules of the Labour Code for at least 12 months.

Additional information

The Institute has been adapted to the needs of the disabled. The Institute does not provide accommodation.

The recruitment process is conducted according to [OTM-R policy](#).