



Head

Antoni Pietrzykowski

Staff

Piotr Buchalski
Włodzimierz Buchowicz
Andrzej Kozioł
Antoni R. Kunicki
Wanda Ziemkowska

Current PhD students

Łukasz Banach
Dariusz Basiak
Eliza Jaśkowska
Joanna Jureczko
Jakub Jurkowski
Roman Pocholski
Piotr Urbański
Agata Włodarska

Former PhD students

Piotr Buchalski
Lidia Bukowska
Artur Cebulski
Beata Herbaczyńska
Andrzej Kozioł
Barbara Kryza-Niemiec
Kinga Leszczyńska
Maciej Marczewski
Ewa Olędzka
Tomasz Radzyński
Tomasz Skrok
Stawomir Szumacher

Current research

- Synthesis of cyclopentadienylnickel complexes with N-heterocyclic carbenes and their application in C-C bond forming reactions
- Alkylaluminum, -gallium and -indium derivatives of diols, dicarboxylic acids, amides, and boroxines, and their activity in polymerization
- Synthesis, structure, and properties of nickelacyclic compounds
- Organoaluminum compounds as the precursors of nanosized aluminum oxide
- Organometallic hydrides for hydrogen storage and energetic materials

Selected publications

Buchowicz W., Banach Ł., Conder J., Guńka P. A., Kubicki D., Buchalski P., *Anion Exchange in $[Ni(\eta^5-C_5H_4R)(Cl)(NHC)]$. Counterion Effect on the Structure and Catalytic Activity*, Dalton Transaction, 43, 5847, 2014

Kozioł A., Jerzykiewicz L. B., Justyniak I., Lis T., Pasynkiewicz S., Pietrzykowski A., *New Ionic Fluorenylnickel Complexes: Synthesis and Solid State Structure*, Journal of Organometallic Chemistry, 767, 22, 2014

Jaśkowska E., Justyniak I., Cyrański M. K., Adamczyk-Woźniak A., Sporzyński A., Zygadło-Monikowska E., Ziemkowska W., *Benzoxaborolate Ligands in Group 13 Metal Complexes*, Journal of Organometallic Chemistry, 732, 8, 2013

Buchowicz W., Herbaczyńska B., Jerzykiewicz L., Lis T., Pasynkiewicz S., Pietrzykowski A., *Triple C-H Bond Activation of a Nickel-Bound Methyl Group. Synthesis and X-ray Structure of a Carbide Cluster $(NiCp)6(\mu_6-C)$* , Inorganic Chemistry, 51, 8292, 2012

Ziemkowska W., Cyrański M.K., Kunicki A. R., *Alkylaluminum Derivatives of Diphenic Acid: Novel Aluminium Carboxylates*, Inorganic Chemistry, 48, 7006, 2009

Buchalski P., Grabowska I., Kamińska E., Suwińska K., *Synthesis and Structures of η^9 -Nickelfluorenyllithium Complexes*, Organometallics, 27, 2346, 2008



Research profile

Formation and cleavage of metal-carbon bonds
Polymerization of olefins and heterocyclic monomers catalyzed with metal complexes
Organometallic functional materials
Carbon-hydrogen bond activation by metal complexes
Organometallic functional materials
Organometallics as precursors of nanosized metal oxides
Olefin metathesis in metal coordination spheres
Metal clusters

Collaboration

Faculty of Chemistry,
University of Warsaw (Poland)
Faculty of Chemistry,
University of Wrocław (Poland)
Faculty of Chemistry, Adam Mickiewicz
University, Poznań (Poland)
North University of Baia Mare, Baia Mare
(Romania)

Scientific Awards

- Team Award of HM Rector of the Warsaw University of Technology for Scientific Achievements in 2005-2006 – A. Pietrzykowski, P. Buchalski, W. Buchowicz
- Individual Award of HM Rector of the Warsaw University of Technology for Scientific Achievements in 2011 – W. Buchowicz
- Individual Award of HM Rector of the Warsaw University of Technology for Scientific Achievements in 2010 – P. Buchalski

Research equipment

- 400 MHz NMR Spectrometer
- Agilent Technologies 7820A GC System
- Vacuum Schlenk lines

