



Head

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Staff

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Marek Marcinek
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Tomasz Trzeciak
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Grażyna Zofia Żukowska

Current PhD students

Aneta Bernarkiewicz
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Marta Kasprzyk-Niedzicka
Jędrzej Korczak
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Paweł Łęzak
Tomasz Trzeciak
Piotr Wieczorek
Piotr Jankowski

Former PhD students

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Aurelia Błażejczyk
Michał Kalita
Marek Marcinek
Leszek Niedzicki
Anna Plewa-Marczewska
Jacek Stygar
Jarosław Syzdek
Grażyna Zofia Żukowska

Current research

- Nonaqueous proton conducting electrolytes and their application in supercapacitors
- Study on the electrochemical and thermal properties of solid polymer electrolytes based on lithium salts and poly(ethylene oxide)
- Synthesis and characterization of new anions for applications in electrolytes for lithium-ion and sodium-ion batteries
- Diagnostics of electrode-electrolyte interfaces in the new generation of lithium batteries

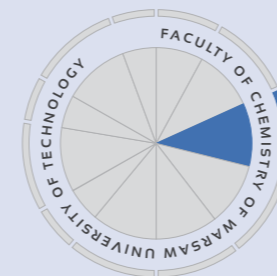
Selected publications

Plewa-Marczewska A., Trzeciak T., Bitner A., Niedzicki L., Dranka M., Żukowska G. Z., Marcinek M., Wieczorek W., *New Tailored Sodium Salts for Battery Applications*, Chemistry of Materials, 26 (17), 4908, 2014

Syzdek J. S., Armand M. B., Falkowski P., Gizowska M., Karłowicz M., Łukaszuk Ł., Marcinek M. Ł., Zalewska A., Szafran M., Masquelier Ch., Tarascon J. M., Wieczorek W. G., Żukowska G. Z., *Reversed Phase Composite Polymeric Electrolytes Based on Poly(Oxyethylene)*, Chemistry of Materials, 23 (7), 1785, 2011

Niedzicki L., Żukowska G. Z., Bukowska M., Szczeciński P., Grugeon S., Laruelle S., Armand M., Panero S., Scrosati B., Marcinek M., Wieczorek W., *New Type of Imidazole Based Salts Designed Specifically for Lithium Ion Batteries*, Electrochimica Acta, 55, 1450, 2010

Niedzicki L., Kasprzyk M., Kuziak K., Żukowska G. Z., Armand M., Bukowska M., Marcinek M., Szczeciński P., Wieczorek W., *Modern Generation of Polymer Electrolytes Based on Lithium Conductive Imidazole Salts*, Journal of Power Sources, 192, 612, 2009



Research profile

Gel, liquid and solid electrolytes
Synthesis of salts for new generation batteries
Diagnostics of electrolyte/metal interfaces
Raman spectra research
FT-IR spectra research
Ionic liquids
New electroactive materials development
Thermal analysis

Collaboration

European Research Institute Alistore
Member – <http://www.alistore.eu/>
Numerous partners in industry
40 Top European Universities
Several US Institutions and Universities
Current FP7 Projects:

- EUROLIION (The Netherlands) – <http://www.eurolion.eu/>
- SIRBAT, University of Liverpool (UK) – <http://www.liv.ac.uk/sirbatt/>

Numerous forms of collaboration with global industrial companies in the field

Scientific Awards

- Prime Minister of Poland Award 2011 for the best PhD thesis – Leszek Niedzicki
- Siemens Promotion Award 2011 for the best PhD thesis – Leszek Niedzicki
- Gold Chemistry Medal – Tomasz Trzeciak

Research equipment

- Biologic Science Instruments VMP3 multichannel potentiostat/galvanostat/Frequency Response Analyzer (FRA)
- Perkin Elmer System 2000 FT-IR spectrometer
- Nicolet Almega Dispersive Raman spectrometer
- High Vacuum drier lines
- Argon-filled gloveboxes (dryboxes)

Additional activity

- Global scientific and industrial collaboration in the field of storage and conversion systems
- Various activities including European educational project dedicated to talented students http://www.u-picardie.fr/mundus_MESC/

