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## ***COST ACTION GREENERING – DATA COLLECTION***

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**First name, Family Name:** Beata Podkościelna

**Type (Academic or Industrial):** Academic

**Country:** Poland

**Leadership position in the COST:** MC substitute on CA18224

**Working Group in which you are involved:** WG1 or WG3

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**Laboratory/Company:** Department of Polymer Chemistry, Institute of Chemical Science, Faculty of Chemistry, Maria Curie-Skłodowska University in Lublin, Poland

**Laboratory/Company info: Maria Curie-Skłodowska University:** The largest higher education institution in Eastern Poland; 11 faculties in Lublin plus the UMCS branch campus in Puławy; Over 80 programmes on offer taught in Polish and English; Over 21 000 (1600 international) students;

**Link to the home page of the Laboratory/Company:** <https://www.umcs.pl/en/>  
<http://www.polimery.umcs.lublin.pl/index.php>

**Fields of expertise:**

- Chemical modification of lignocellulosic materials
- Synthesis of new monomers, polymers, hybrid and bio-based composite materials,
- Synthesis new polymers in different forms: microspheres, bulk, powders or films,
- Synthesis porous polymeric sorbents,
- Chemical modification of polymeric microspheres,
- Preparation of photoluminescent monomers and their copolymerization,
- Spectroscopic characterization of new materials (FTIR, 1H and 13C NMR),
- Thermal characterization of copolymers and their gaseous products (TG/DSC/FTIR coupled method)

**5 Main publications or patents:**

- Y. Bolbukh, B. Podkościelna, A. Lipke, A. Bartnicki, B. Gawdzik, V. Tertykh, Immobilization of Polymeric Luminophor on Nanoparticles Surface, *Nanoscale Research Letters*, 2016, 11:206
- M. Sobiesiak, B. Podkościelna, O. Sevastyanova, Thermal degradation behavior of lignin-modified porous styrene-divinylbenzene and styrene-bisphenol A glycerolate diacrylate copolymer microspheres, *Journal of Analytical and Applied Pyrolysis*, 2017, 123:364
- M. Goliszek, B. Podkościelna, K. Fila, A.V. Riazanova, S. Aminzadeh, O. Sevastyanova, V.M. Gun'ko, Synthesis and structure characterization of polymeric nanoporous microspheres with lignin, *Cellulose*, 25 (2018) 5843-5862.



- R. Łyszczek, M. Gil, H. Głuchowska, B. Podkościelna, A. Lipke, P. Mergo, Hybrid materials based on PEGDMA matrix and europium(III) carboxylates -thermal and luminescent investigations, *European Polymer Journal*, 106 (2018) 318-328.
- M. Goliszek, B. Podkościelna, O. Sevastyanova, K. Fila, A. Chabros, P. Pączkowski, Investigation of accelerated aging of lignin-containing polymer materials, *International Journal of Biological Macromolecules* 123 (2019) 910-922.

#### **Collaborations:**

Fibre and Polymer Technology/Wood Chemistry and Pulp Technology KTH-Teknikringen 56-58, SE-100 44 Stockholm, Sweden; Institute of Sorption and Problems of Endoecology, Naumov St 13, 03164 Kiev, Ukraine; Laboratory of Optical Fibre, UMCS, Lublin, Poland; C2MA - IMT Mines Alès, 6 avenue de Clavières 30100 Alès, France.

#### **Facilities:**

- UV-VIS spectrophotometer ,
- FTIR spectrophotometer,
- Thermal analyzer STA with analyzed simultaneously gaseous products evolved from the sample at the time of heating by the on line coupled Fourier transform infrared spectrometer FT-IR ,
- Differential scanning calorimetry (DSC),
- Dynamic mechanical analyzer (DMA)