

Newsletter II (01.09.2021 - 31.08.2022)

NEWS

- Our coordinator, prof. Przemyslaw Data shows **innovative vision of our region:**
(<https://www.money.pl/gospodarka/innovacyjna-wizja-przyszlosci-w-regionie-podlaskim-i-slaskim-6696521855498848a.html>)
Whole episode you can see here:
(<https://vimeo.com/619710845/2bf1f6d4d5?fbclid=IwAR2m2kf8YKdG4PX1HDF077RtSi1oRealeCTphgkHr8tqNWSxhDBxhflPmkE>)
- **FUTURE MATERIALS** - an article (PL) in the Bulletin of the Silesian University of Technology (3.2022 pp. 15-18)
(<https://delibra.bg.polsl.pl/dlibra/doccontent?id=73785>)
- In **June 2022** prof. P. Troshin has resigned from his position and we are looking for new candidate.



 **SCIENTIFIC MEETINGS** 

- **MTS-1/21 Meet the Scientist** was held on 8th of December 2021

(http://erachair.com/?tribe_events=mts-1-21-poznaj-naukowca-meet-the-scientist)

We had the opportunity to listen to research conducted by prof—Rene Janssen group during the meeting. Prof. Janssen, who works with organic electronics, mainly organic solar cells, is one of the Highly Cited Researchers and a winner of the ERC Advanced Grant.

- **MTS-2/21 Meet the Scientist** was held on 15th of December 2021

(http://erachair.com/?tribe_events=mts-2-21-poznaj-naukowca-meet-the-scientist)

We had the opportunity to meet Prof. Pierre Audebert, a synthetic chemist and develop materials for organic electronics and photocatalysis during the meeting.

- **H2020 ExCEED Summer School**

At the beginning of July 2022 (4-6.07.2022), we have organized the **H2020 ExCEED Summer School**. It was held at SUT and it was three days full of interesting and inspiring activities. This Summer School was devoted to organic emitters and the schedule included lectures as well as laboratories.



 **PROJECT FUNDING WORKSHOPS** 

The meetings are held to present the different sources of funding that could support the research. In addition, we presented where to apply, current projects, and the crucial points from the reviewer's point of view.

- **MTP-1/22 Meet the Project**, which was held on 17th of January 2022

(http://erachair.com/?tribe_events=mtp-1-22-poznaj-projekt-meet-the-project)

During the meeting, we learned the structure of Horizon Europe funding and upcoming calls in the area of materials research.



The ExCEED project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no 952008

 Achievements 

- **26.11.2021** – Prof. P. Troshin has received funding for his project which was submitted within OPUS 21 call: **Rational design of absorber materials for perovskite solar cells with high radiation hardness for space applications (2021/41/B/ST5/03697)**

(https://projekty.ncn.gov.pl/en/index.php?projekt_id=524211)

 Publications 

- **01.01.2022**

Komissarova, E.A.; Kuklin, S.A.; Maskaev, A. V.; Latypova, A.F.; Kuznetsov, P.M.; Emelianov, N.A.; Nikitenko, S.L.; Martynov, I. V.; Kuznetsov, I.E.; Akkuratov, A. V.; et al. **Novel Benzodithiophene-TTBTBT Copolymers: Synthesis and Investigation in Organic and Perovskite Solar Cells**. Sustain. Energy Fuels 2022, 6, 3542–3550. (<https://doi.org/10.1039/d2se00463a>)

- **14.02.2022**

M.M. Elnaggar, L.A. Frolova, A.M. Gordeeva, M.I. Ustinova, H. Laurenzen, A. V. Akkuratov, S.L. Nikitenko, E.A. Solov'eva, S.Y. Luchkin, Y.S. Fedotov, S.A. Tsarev, N.N. Dremova, K.J. Stevenson, S.I. Bredikhin, S. Olthof, S.M. Aldoshin, P.A. Troshin, **Improving stability of perovskite solar cells using fullerene-polymer composite electron transport layer**, Synth. Met. 286 (2022) 117028. (<https://doi.org/10.1016/j.synthmet.2022.117028>)

- **09.06.2022**

Kraevaya, O.A.; Latypova, A.F.; Sokolova, A.A.; Seleznyova, A.A.; Emelianov, N.A.; Slesarenko, N.A.; Markov, V.Y.; Frolova, L.A.; Troshin, P.A. **Oxidative Polymerization of Triarylaminines: A Promising Route to Low-Cost Hole Transport Materials for Efficient Perovskite Solar Cells**. Sustain. Energy Fuels 2022, 6, 3485–3489. (<https://doi.org/10.1039/d2se00492e>)

- **15.06.2022**

Kuznetsov, M.K.; Emelianov, N.A.; Korchagin, D. V.; Shilov, G. V.; Aldoshin, S.M.; Troshin, P.A.; Frolova, L.A. **Enhanced Photostability of CsPbI₂Br-Based Perovskite Solar Cells through Suppression of Phase Segregation Using a Zwitterionic Additive**. Sustain. Energy Fuels 2022, 6, 3536–3541. (<https://doi.org/10.1039/d2se00450j>)

- **29.06.2022**

Slesarenko, A.A.; Baymuratova, G.R.; Yakuschenko, I.K.; Tulibaeva, G.Z.; Vasil'ev, S.G.; Yudina, A. V.; Troshin, P.A.; Shestakov, A.F.; Yarmolenko, O. V. **New Organic Electrode Materials for Lithium Batteries Produced by Condensation of Cyclohexanehexone with P-Phenylenediamine**. Synth. Met. 2022, 289, 117113. (<https://doi.org/10.1016/j.synthmet.2022.117113>)

- **01.08.2021**

O.A. Kraevaya, V.S. Bolshakova, A.S. Peregudov, A. V. Chernyak, N.A. Slesarenko, V.Y. Markov, N.S. Lukonina, V.M. Martynenko, E.O. Sinegubova, A.F. Shestakov, V. V. Zarubaev, D. Schols, P.A. Troshin, **Water-Promoted Reaction of C₆₀Ar₅Cl Compounds with Thiophenes Delivers a Family of Multifunctional Fullerene Derivatives with Selective Antiviral Properties**, *Org. Lett.* 23 (2021) 7226–7230. (<https://doi.org/10.1021/acs.orglett.1c02623>)

- **07.10.2021**

M.M. Elnaggar, L.A. Frolova, S.D. Babenko, S.M. Aldoshin, P.A. Troshin, **Conjugated push-pull type oligomer as a new electron transport material for improved stability p-i-n perovskite solar cells**, *Synth. Met.* 281 (2021) 116921. (<https://doi.org/10.1016/j.synthmet.2021.116921>)

- **10.11.2021**

V. Ramezankhani, I.K. Yakuschenko, A. V. Mumyatov, S.G. Vasil'ev, I.S. Zhidkov, E.Z. Kurmaev, A.F. Shestakov, P.A. Troshin, **Octahydroxytetraazapentacenedione: New organic electrode material for fast and stable potassium batteries**, *J. Power Sources.* 517 (2022) 230711. (<https://doi.org/10.1016/j.jpowsour.2021.230711>)

- **20.12.2021**

V. Ramezankhani, I.K. Yakuschenko, S. Vasilyev, T.A. Savinykh, A. V. Mumyatov, I.S. Zhidkov, E. V. Shchurik, E.Z. Kurmaev, A.F. Shestakov, P.A. Troshin, **High-capacity polymer electrodes for potassium batteries**, *J. Mater. Chem. A.* 10 (2022) 3044–3050. (<https://doi.org/10.1039/d1ta05815k>)

 **Upcoming events** 

- Currently, we are organising **International Workshops on Nano and Bio-Photonics**, which will be held in Evian (France) on 25 – 30.09.2022.