

# NOVEL SYNTHETIC METHODOLOGY OF CONDUCTING POLYMERS AND COMPOSITES

## Moscow Institute of Physics and Technology (National Research University)

Language of study: **English**

Mode of study: **full-time**

Duration: **4 years**

Availability of free education: **yes**

Price: **375 000 RUB**

Programme webpage at the university website:

<https://eng.mipt.ru/programs/novel-synthetic-methodology-of-conducting-polymers-and-composites/>

Programme curator: **Denis Ustyuzhaninov**

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### Entry requirements:

- Master's degree / equivalent in a related field
- B2 level of English
- Good track record of publications related to the topic of the intended research
- Strong research proposal 1,500 - 3,500 words

### Research supervisor:

[Ekaterina Zolotukhina](#)

PhD, DSc

### Supervisor's research interests:

Conducting polymers, electrochemical deposition, synthesis of electroactive polymers and composites, their application for electrocatalysis and sensors design and testing, flow electrodes, supercapacitors, PEDOT-PSS composites, novel methodology of metal/ salts/metal oxides - conductive polymers composites synthesis.

### Research highlights:

- New synthetic approach to conducting/ionexchange polymer composites.
- High-level electrochemical methodology of research work Interaction with the leading European research centers.

### Supervisor's specific requirements:

- Background in the theoretical and applied electrochemistry (high level).
- Basic skills of work with Auto lab PGSTAT 302 or analogues with Nova 1.11.
- 50% per year attendance in Russian laboratory (IPCP RAS).

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### **Main publications:**

- Journal of Solid State Electrochemistry 2019 (23) 251258. 10.1007/s10008-018-4129-2.
- Electrochimica Acta 2020 (345) 136164. 10.1016/j. electacta.2020.136164.
- Electrochimica Acta. 2015 (179) 364-371. 10.1016/j. electacta.2015.03.227.

### **Specializations within this programme**