



**VABILO NA PREGLOV KOLOKVIJ /  
INVITATION TO THE PREGL COLLOQUIUM**

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**Velika predavalnica Kemijskega inštituta / Lecture Hall at the  
National Institute of Chemistry; Hajdrihova 19, Ljubljana**

**Electrochemical Energy Conversion – the key for  
sustainable utilization of solar energy**

The worldwide electrical energy supply landscape will change drastically in the near future towards renewable and environmentally friendly technologies. However, solar power supply is not demand driven, but strongly depends on geographic and climatic conditions. While currently conventional power plants still largely cover the gap in times of low supply, storage and conversion of energy will become increasingly important. This opens up a billion Euro market for new technologies, with continuous electrochemical flow reactors like fuel cells and electrolyzers having excellent chances to become the dominating player due to their high efficiency and flexibility.

In this presentation I will show the recent advances and the contributions of our research group to the development of efficient and foremost stable electrolyzers and fuel cells. In particular, I will demonstrate how our novel investigation techniques have advanced the fundamental understanding of the essential catalytic processes in electrochemical energy conversion, which has led to the optimization of operation conditions as well as to the development of new materials. This will be rounded up by a brief outlook into appealing future research directions of reactor design, which will aid in achieving a breakthrough in the energy conversion market.

**Vljudno vabljeni! / Kindly invited!**

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