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European Social Fund

**VABILO NA PREDAVANJE
V OKVIRU DOKTORSKEGA ŠTUDIJA
KEMIJSKE ZNANOSTI**

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z naslovom:

Interfacing electrochemistry

v sredo, 19. novembra 2014 ob 15:00 uri

v predavalnici K1.119 v 1. nadstropju Fakultete
za kemijo in kemijsko tehnologijo, Večna pot 113

Vljudno vabljeni!



Abstract

Electrocatalysis lies at the heart of the chemical phenomena that take place at electrochemical interfaces. In the future it will be the key to driving technological innovations that are urgently needed to deliver reliable, affordable and environmentally friendly energy. In this lecture, we describe how a synergistic interaction between fundamental science and technological progress has resulted in both greatly enhanced understanding of electrocatalytic systems and the development of practically improved materials for fuel cells, electrolyzers and batteries. We demonstrate that it is indeed possible to develop distinctive experimental strategies that will enable the elucidation of structure-function relations for the oxygen and hydrogen electrochemistry on well-characterized materials (metals and oxides) in both water-based electrolytes and organic environments. Although the field is still in its infancy, a great deal has already been learned and trends are beginning to emerge that give some predictive ability with respect to the near-surface structure and nature assumed by electrode materials and double layer components and their activity, stability and selectivity towards simple molecules. We conclude that understanding the complexity (simplicity) of electrochemical interfaces would open new avenues for design and deployment of alternative energy systems.