

**Dr. Vladimír Komanický, Ph.D.****Senior Scientist**

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E-mail: vladimir.komanicky@upjs.skURL: <https://www.upjs.sk/PF/zamestnanec/vladimir.komanicky>**Current position(s):**

Senior scientist

Head of Nanotechnology laboratory for fabrication of devices for electronics, sensors and environmental applications.

Head of Scanning electron microscopy and electron beam lithography laboratory

Profile:

Dr. V. Komanický is a head of Nanotechnology laboratory for fabrication of devices for electronics, sensors and environmental applications and head of Scanning electron microscopy and electron beam lithography laboratory. The main focus of his scientific research is the study and preparation of coatings and thin films using PVD techniques as well as their complex characterization using diffraction, spectroscopic and microscopic methodologies. Dr. V. Komanický is expert in the use of nanofabrication methods for the preparation of objects with a reduced dimension for fundamental and applied research in the fields of superconductivity, magnetism and technologies for energy conversion and storage. In recent years, he has studied processes induced by electron beam and electromagnetic radiation on surfaces amorphous chalcogenide glass thin films. He authored and co-authored more than 80 scientific publications, cited more than 1,100 times, gave more than 15 invited lectures at home and abroad. He is a member of the top-research scientific team QMAGNA identified by Accreditation committee ARRA at the Institute of Physical Sciences UPJŠ v Košiciach.

Experience:

2006 - now Institute of Physics UPJŠ

2007-2008 Institute of Experimental Physics SAS Košice

2003-2006 postdoctoral appointment Argonne National Laboratory, USA

1998-2003 Ph.D. study University of California, Davis, USA

Projects:

Štúdium procesov vyvolaných elektrónovým zväzkom a elektromagnetickým žiarením v chalcogenidových sklách APVV-17-0059, 2018- , zodpovedný riešiteľ

Príprava nanoštruktúrovaných funkčných materiálov pomocou nanolitografií a samosporiadania a štúdium ich vlastností. VEGA 1/0138/10, 2010-2011, zodpovedný riešiteľ

Štúdium progresívnych materiálov na efektívnejší prenos a konverziu energie. VEGA 1/0782/12, 2012-2015, zodpovedný riešiteľ

Štúdium supravodivých nanoštruktúr a nanovrstiev, VEGA 1/0409/15, 2015-2018, zástupca zodpovedného riešiteľa

Synchrotron Radiation Studies: Structure and Reactivity of Catalytic Interfaces. Bilaterálny projekt medzi UPJŠ a Argonne National Laboratory, udelený ministerstvom energetiky USA, 2011 - pokračujúci, riešiteľ

Publications:

Author ID (in SCOPUS): **11240493200**

1. Wang C., Chi M., Li D., Strmcnik D., Van Der Vliet D., Wang G., Komanicky V., Chang K.-C., Paulikas A.P., Tripkovic D., Pearson J., More K.L., Markovic N.M., Stamenkovic, V.R. Design and synthesis of bimetallic electrocatalyst with multilayered Pt-skin surfaces (2011) *Journal of the American Chemical Society*, 133 (36), pp. 14396-14403.
2. Strmcnik D., Van Der Vliet D., Chang K. C., Komanicky V., Kodama K., You H., Stamenkovic V., Markovic N., Effects of Li(+), K(+), and Ba(2+) Cations on the ORR at Model and High Surface Area Pt and Au Surfaces in Alkaline Solutions. *Journal of Physical Chemistry Letters*. (2011), Vol. 2, no. 21, 2733-2736.
3. Komanicky V., Iddir H., Chang K. C, Menzel A., Karapetrov G., Hennessy D., You H., Zapol P., Shape dependent activity of platinum array catalyst. *Journal of the American Chemical Society*. (2009), Vol. 131, iss. 16,p. 5732-33.
4. Strmcnik D., Tripkovic D., Van der Vliet D., Chang K. C., Komanicky V., You H., Karapetrov G., Greely J., Stamenkovic V., Markovic N., Unique activity of platinum adislands in the CO electrooxidation reaction. *Journal of the American Chemical Society*. (2008), Vol. 130, no. 46, s. 15332-15339.
5. Komanicky V., Chang K. C., Menzel A., Markovic N., You H., Wang X., Myers D. Stability and dissolution of platinum surfaces in perchloric acid. *Journal of the Electrochemical Society*. (2006), 153, no. 10, B446-B451.