

CV – BERKÓ, ANDRÁS

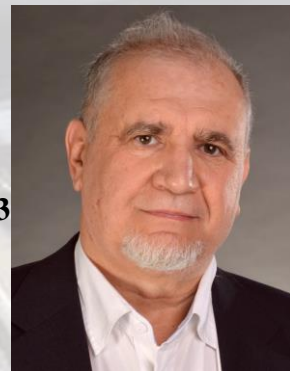
February 20, 2023

András Berkó (69), PhD, DSc, born in Szeged, Hungary (25 June 1954)
MTA Scientific Adviser (retired), SZTE Private Tutor
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Web of Science Researcher ID : AAA-6588-2019



Education

Diploma in Physics: University of Szeged, Hungary (1978)
University doctor: University of Szeged, Hungary (1983)
Candidate of Science – PhD : University of Szeged (1990)
Doctor of the Academy, DSc : Hungarian Academy of Sciences (2001)

Scientific activity in other countries

A.v.Humboldt-Fellow at the Research Center Julich , Germany (1988-89)
Guest Scientist at the Research Center of Julich, Germany (1989-90)
A.v.Humboldt- Fellow at University of Ulm, Germany (1993)
Guest Scientist at Sincrotrone Trieste, Italy (1995, 1998)
Guest Scientist at University of Bourgogne, Dijon (2006)
A.v.Humboldt- Senior Fellow at University of Ulm, Germany (2007)
A.v.Humboldt- Senior Fellow at University of Ulm, Germany (2008)

Awards and memberships

Graduate Student Conference Prize (1979);
Alexander von Humboldt Fellowship (1988);
Member of the Committee of Solid State Chemistry
of the Hungarian Academy of Sciences (1986-)
Member of the Hungarian Committee of IUVESTA (1993-);
Member of the Hungarian Vacuum Society (1993-);
Secretary of the Material Science Working Committee (Szeged)
of the Hungarian Academy of Sciences (1999-2006);
Secretary of the Working Committee of the Hungarian Academy in Surface Chemistry
and Nanostructural Science (Budapest) of the Hungarian Academy of Sciences (2001-
2011);
National Representative of the IUVESTA in the field of Nanoscience (2003-2005-2008),
Surface Science (2009-2011) and Concillor Alternate (2012-2018);
Academy Prize of the Hungarian Academy of Sciences (2001);
President of the Material Science Working Committee SzAB of the Hungarian Academy
of Sciences (2006-2017);
President of the Committee of the Hungarian Academy in Surface Chemistry and
Nanostructures of the Hungarian Academy of Sciences (2011-2017);
Chairman of the ECOSS-33 Conference organized in Szeged, 2017;

Publications

András Berkó is co-author of 73 papers appeared in ranked international journals and
10 articles presented in Hungarian scientific journals.
Independent citations 1333; Hirsch Index: 25;

Tutorial activity

At the University of Szeged he supervised 17 research works for Diploma and 4 for PhD Thesis (PhD-Diploma (3) – János Szökő /2004, Zsolt Majzik /2013, Richard Gubó /2020, PhD-Absolutorium (1) - Anna Kiss /2007).

Most important recent papers

- (1) A. Berkó, R. Gubó, L. Óvári; L. Bugyi, I. Szent, Z. Kónya: Interaction of Rh with Rh nanoparticles encapsulated by ordered ultrathin TiO_{1+x} film on $\text{TiO}_2(110)$ surface, *Langmuir* 29(51) (2013) 15868-15877.
- (2) L. Óvári, A. Berkó, R. Gubó, Á. Rácz, Z. Kónya: Effect of a Gold Cover Layer on the Encapsulation of Rhodium by Titanium Oxides on Titanium Dioxide(110), *J. Phys. Chem. C* 118 (23) (2014) 12340-12352.
- (3) A. Berkó, R. Gubó, L. Óvári, Z. Kónya: Rh and Au deposited on ultrathin $\text{TiO}_{-1.2}$ film formed on Rh(111) facets and the effects of CO exposure, *Surface Science* 641 (2015) 300-304.
- (4) P. Mutombo, R. Gubó, A. Berkó: Interaction of gold with a pinwheel $\text{TiO}_{-1.2}$ film formed on Rh(111) facet, *J. Phys. Chem. C* 120(23) (2016) 12917-12923.
- (5) L. Óvári, A. Berkó, G. Vári, R. Gubó, A. P. Farkas, Z. Kónya: The growth and thermal properties of Au deposited on Rh(111): formation of ordered surface alloy; *Phys Chem Chem Phys* 18 (2016) 25230-25240.
- (6) R. Gubó, C. M. Yim, M. Allan, C. L. Pang, A. Berkó, G. Thornton: Variation of SMSI with the Au:Pd Ratio of Bimetallic Nanoparticles on $\text{TiO}_2(110)$, *Topics in Catalysis* 61 (2018) 308-317.
- (7) R. Gubó, G. Vári, J. Kiss, A. P. Farkas, K. Palotás, L. Óvári, A. Berkó, Z. Kónya: Tailoring the hexagonal boron nitride nanomesh on Rh(111) by gold, *Phys Chem Chem Phys* 20 (22) (2018) 1463-9076.
- (8) A.P. Farkas, Á. Sztás, G. Vári, R. Gubó, L. Óvári, A. Berkó, J. Kiss, Z. Kónya: Effect of gold on the adsorption properties of acetaldehyde on clean and h-BN covered Rh(111) surface, *Topics in Catal* 61 (12-13) (2018) 1247-1256.
- (9) A. Berkó, J. Kiss, Z. Kónya, F. Solymosi: Preface – New Material Discoveries via Surface Science approach, *Topics in Catal* 61 (12-13). (2018) 1209-1209.
- (10) Palotás, Krisztián; Óvári, László; Vári, Gábor; Gubó, Richard; Farkas, Arnold Péter; Kiss, János; Berkó, András; Kónya, Zoltán: Au–Rh Surface Structures on Rh(111): DFT Insights into the Formation of an Ordered Surface Alloy, *J Phys Chem C*, 122 (39) (2018) 22435-22447.

Research activity

- (1) Atomic scale study of the supported 2D oxide films: structure and reactivity;
- (2) Formation of decoration oxide layers on bimetallic nanoparticles supported on oxide single crystals;
- (3) Formation, structure and reactivity of h-BN and graphene films on metal surfaces and surface-alloys;