

Europass Curriculum Vitae



Personal information

First name(s) / Surname(s) **Dr. habil. András Sápi**
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Nationality Hungarian
Date of birth 20.03.1983
Gender Male

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Work experience

Dates	09/01/2010-08/31/2014
Occupation or position held	Assistant lecturer
Main activities and responsibilities	Educational, supervisory and research activities on the field of material science, nanotechnology, environmental and applied chemistry
Name and address of employer	Dept. of Applied and Environmental Chemistry, Faculty of Sciences, University of Szeged, 1 Rerrich square, H-6720, Szeged, Hungary
Dates	06/31/2012-10/31/2014
Occupation or position held	Postdoc
Main activities and responsibilities	Research on Heterogeneous Catalysis, Surface Science and Nanoparticles
Name and address of employer	UC Berkeley, LBNL, California, USA
Dates	09/01/2014-Present
Occupation or position held	Assistant Professor
Main activities and responsibilities	Educational, supervisory and research activities on the field of material science, nanotechnology, environmental and applied chemistry
Name and address of employer	Dept. of Applied and Environmental Chemistry, Faculty of Sciences, University of Szeged, 1 Rerrich square, H-6720, Szeged, Hungary
Dates	2007-2012
Title of qualification awarded	PhD in chemistry

Principal subjects/occupational skills covered Carbon nanotube - metallic nanoparticle-based nanocomposites for catalytic applications

Name and type of organisation providing education and training Faculty of Sciences, University of Szeged, Hungary

Level in national or international classification ISCED 6, EQF Level 8

Education and training

Dates 2020

Title of qualification awarded Habilitated Doctor in Chemistry
(Surface Processes Designed by Nanotechnology)
Faculty of Sciences, University of Szeged, Hungary

Dates 2007-2012

Title of qualification awarded PhD in chemistry

Principal subjects/occupational skills covered Carbon nanotube - metallic nanoparticle-based nanocomposites for catalytic applications

Name and type of organisation providing education and training Faculty of Sciences, University of Szeged, Hungary

Level in national or international classification ISCED 6, EQF Level 8

Dates 2001 – 2007

Title of qualification awarded Chemist MSc, Teacher of Chemistry MSc, English-Hungarian professional (chemist) interpreter BSc

Principal subjects/occupational skills covered - Organic, Inorganic, Physical, Analytical, Applied Chemistry, Colloid and Material Science
- Psychology, Pedagogy, Chemical educational skills
- English-Hungarian interpreting skills

Name and type of organisation providing education and training Faculty of Sciences, University of Szeged, Hungary

Level in national or international classification ISCED 5A, EQF Level 7

Personal skills and competences

Mother tongue(s) **Hungarian**

Other language(s)

Self-assessment

European level ()*

English

French

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
C1	Advanced level	C1	Advanced level	C1	Advanced level	C1	Advanced level	C1	Advanced level
A1	Beginners level	A1	Beginners level	A1	Beginners level	A1	Beginners level	A1	Beginners level

(*) [Common European Framework of Reference for Languages](#)

Social skills and competences	25 yrs experience in working in a research group. Teaching >100 and Supervising >40 undergrad and PhD Students. Research expeditions (9 month - Finland and 2 yrs - USA); Supervision and Co-leading of EU and National Projects (TÉT, GINOP, FP6 SANES, FP7 ThemaCNT etc.)
Technical skills and competences	Nanotechnology, Surface Science, Heterogeneous Catalysis, Material Science, Environmental Engineering & Chemistry, Chemical Industry
Computer skills and competences	I have passed a Hungarian intermediate software operational exam, Familiar with MS Office tools (Word, Excel, PowerPoint) and data analysis programme (Origin, CasaXPS)
Driving licence	I am a holder of a Hungarian driving licence with category "B"
Additional information	<p><u>Publications</u></p> <p>>100 publications (Cumulative impact factor: ~250, Citation: ~2000, H-index: 22), 2 book chapter, 1 book, 2 patents, ~50 posters, 10 invited lecture, ~30 oral presentations</p> <p><u>Last five years' research interests</u></p> <ul style="list-style-type: none"> - Synthesis and characterization of Controlled size metallic nanoparticles and 3D mesoporous oxide materials - Heterogeneous catalytic reactions and other surface chemical processes (e.g. CO₂ activation, electro photochemistry, sensors etc.) on designed nanostructured catalysts - Molecular level exploration of surfaces under reaction conditions with DRIFTS and NAP-XPS techniques - Exhaust system development by catalysis

Awards

2020	Innovational Price of SZAB
2017	Dr. Paál Zoltán Catalyst Research Scholarship Winner
2016	OTKA Postdoctoral Scholarship
2016	Új Nemzeti Kiválóság Program – Postdoctoral Scholarship
2015	Campus Hungary Award
2014	Bolyai János Scholarship
2011	Hungarian Academy of Science, “NanoDemo” Idea Award
2007	XXVIII. OTDK, Szeged 1. prize
2007	XXVIII. OTDK <i>Magyary Zoltán Közalapítvány prize</i>
2006	Helyi TDK, Szeged 2. prize
2006	8. Temesvári Műszaki TDK, prize

Projects

2020-2022: 2019-2.1.11-TÉT-2019-00090, Nem szokványos katalizátor hordozókkal egy Zöldebb jövőért: Hangolható hierarchikus pórusú polimerek alkalmazása kontrollált méretű fém nanorészecskék hordozójaként CO aktiválási és C-C formálási reakciókban – Szakmai Vezető

2020-2023: PIACI-KFI-2019-00349, Hierarchikus kamraszerkezetű, kompozit, expandált polisztirol termékek, és gyártástechnológiájuk kifejlesztése – Szakmai Vezető

2019-2021: EFOP-3.6.1-16-2016-00014 azonosító számú „Diszruptív technológiák kutatásfejlesztése az e-mobility területén és integrálásuk a mérnökképzésbe” – Senior Kutató

2017 – 2020: GiNOP 2.2.1. : Ipari füstgázok károsanyag tartalmát csökkentő technológia kidolgozása új módosított felületű kaolinit agyagásvány és zeolit kompozit katalizátorok fejlesztésével – Szakmai Felelős

2016 - 2017: ÚNKP-2016-4: 5 nm Pt/Mezopórusos NiO *in-situ* atomi és molekuláris szintű vizsgálata CO₂ hidrogénezési reakcióban – Project Leader

2016 – 2019: TÉT_15_IN-1-2016-0013: Új típusú BiOX (X = Cl, Br, I) BiOX kompozitok környezetbarát előállítás, immobilizálása aktív szénzál/kerámiapapír felületén hatékony és újrahasznosítható fotokatalitikus felületek kialakítására – Senior Researcher

2016 – 2019: OTKA PD: Using interfaces of Pt/CoO_x Janus nanoparticles and other complex structures for heterogeneous catalytic CO₂ and ethanol activation – Project Leader

2015-2018: OTKA NKFI-6: Interactions between ferroelectric core-shell nanospheres and autocatalytic front reactions – Towards developing combined visual/RFID sensor labels utilizing pH-change based responses – Senior researcher

2014-present: SzTE-TTIK Department of Applied and Environmental Chemistry: Research on surface science and catalysis with size controlled nanoparticles and 3D mesoporous oxides

2012-2014: University of California (Berkeley), Lawrence Berkeley National Laboratories, Material Science Division, Surface Chemical Department: Supervising research on alcohol oxidation

2010-2012: EC FP7 "THEMA-CNT": Coordination of Low-temperature CNT growing

2007-present: Collaboration with OKFT KFT.: Gel pig technologies

2006-2009: EC FP6 STREP "SANES": Functionalization of CNT surfaces

2008-2012: Collaboration with SzTE-ÁOK: Effect of nanoparticles on rats

2008-present: Coordination of research on CNTs, Titanate nanostructures and Pt nanoparticles

2007-2009: Collaboration with University of Oulu: Nanoparticles/CNT nanocomposites



11st of December, 2021.

Scientific activity – Publication list

Dr. András Sági

1. Publications

>75 publications (registered in ISI Web of Science Citation Index: 50) (Cumulative impact factor: ~185, Citation (without self-citation): ~800, H-index: 16), 2 book chapter, 1 book, 2 patents, ~20 posters, 4 invited lecture, ~20 oral presentations

A) Publications

- 2020 János Kiss*, András Sági, Mariann Tóth, Ákos Kukovecz and Zoltán Kónya
Rh-Induced Support Transformation and Rh incorporation in Titanate Structures and Their Influence on Catalytic Activity
Catalysts 10, 212, doi:10.3390/catal10020212
IF = 3.444
- 2020 Laszlo Merai, T. Rajkuma, Laszlo Janovak, Andras Sapi,* Imre Szent, Laszlo Nagy, Tamas Molnar, Istvan Bíró, Jozsef Sarosi, Akos Kukovecz, Zoltan Konya
Sulfur nanoparticles transform montmorillonite into an inorganic surfactant applicable in thermoplastics processing
Polymer Testing 85 (2020) 106419
IF = 2.943
- 2020 Hampel, Boglárka; Pap, Zsolt; Sapi, András; Szamosvölgyi, Ákos; Baia, Lucian; Hernadi, Klara
Application of TiO₂-Cu Composites in Photocatalytic Degradation Different Pollutants and Hydrogen Production
CATALYSTS 10 : 1 p. 85 (2020)
IF = 3.444
- 2019 T. Rajkumar, Sági, András, Ábel, Marietta, Farkas, Ferenc, Juan Fernando Gómez-Pérez, Kukovecz, Ákos; Kónya, Zoltán
Catalysis Letters, <https://doi.org/10.1007/s10562-019-03051-8>
IF = 2.372
- 2019 Sági, András ; Rajkumar, T. ; Ábel, Marietta ; Efremova, Anastasiia ; Grósz, András ; Gyuris, Anett ; Ábrahámné, Kornélia B. ; Szent, Imre ; Kiss, János ; Varga, Tamás, Kukovecz, Ákos, Kónya, Zoltán
Noble-metal-free and Pt nanoparticles-loaded, mesoporous oxides as efficient catalysts for CO₂ hydrogenation and dry reforming with methane
JOURNAL OF CO₂ UTILIZATION 32 pp. 106-118. , 13 p. (2019)

IF = 5.503

- 2019 Sági, András; Kashaboina, Upendar ; Ábrahámné, Kornélia B. ; Gómez-Pérez, Juan Fernando ; Szenti, Imre ; Halasi, Gyula ; Kiss, János ; Nagy, Balázs ; Varga, Tamás ; Kukovecz, Ákos, Kónya, Zoltán
Synergetic of Pt Nanoparticles and H-ZSM-5 Zeolites for Efficient CO₂ Activation: Role of Interfacial Sites in High Activity
FRONTIERS IN MATERIALS 6 Paper: 127 , 12 p. (2019)

IF = 2.000

- 2019 Rajkumar, T. ; Sapi, Andras ; Das, Gitishree ; Debnath, Trishna ; Ansari, AbuZar ; Patra, Jayanta Kumar
Biosynthesis of silver nanoparticle using extract of Zea mays (corn flour) and investigation of its cytotoxicity effect and radical scavenging potential
JOURNAL OF PHOTOCHEMISTRY AND PHOTOBIOLOGY B-BIOLOGY 193 pp. 1-7. , 7 p. (2019)

IF = 4.067

- 2019 Sági András, Halasi Gyula, Grósz András, Kiss János, Kéri Albert, Ballai Gergő, Galbács Gábor, Kukovecz Ákos, Kónya Zoltán
Designed Pt promoted 3D mesoporous Co₃O₄ catalyst in CO₂ hydrogenation
J. Nanosci. Nanotech. in press: Paper 10.1166/jnn.2018.15779. 6 p. (2019)

IF = 1.354

- 2019 Szabó Mária, Halasi Gyula, Sági András, Juhász Koppány Levente, Kiss János, Kukovecz Ákos, Kónya Zoltán
Outstanding activity and selectivity of controlled size Pt nanoparticles over WO₃ nanowires in ethanol decomposition reaction
J. Nanosci. Nanotech. in press: Paper 10.1166/jnn.2018.15783. 6 p. (2019)

IF = 1.354

- 2019 Tamás Gazdag, Ádám Baróthi, Koppány Levente Juhász, Attila Kunfi, Péter Németh, András Sági², Kornél Szóri, Gábor London
Effect of particle restructuring during reduction processes over polydopamine-supported Pd nanoparticles
J. Nanosci. Nanotech. in press: Paper 10.1166/jnn.2018.xxx. 6 p. (2019)

IF = 1.354

- 2019 Melinda Mohl[§], Aron Dombovari[§], Mária Szabó[†], Topias Järvinen[§], Olli Pitkänen[§], András Sági[†], Koppány L. Juhász[†], Albert Kéri[‡], Gábor Galbács[‡], Ákos Kukovecz[†], Zoltán Kónya^{†,ψ}, Krisztian, Kordas
Size-dependent H₂ sensing over supported Pt nanoparticles
J. Nanosci. Nanotech. in press: Paper 10.1166/jnn.2018.xxx. 6 p. (2019)

IF = 1.354

- 2018 Zhao Fuhua, Wang Ning, Zhang Mingjia, Sapi Andras, Yu Jiaojiao, Li Xiaodong, Cui Weiwei, Yang Ze, Huang Changshui
In-situ Growth of Graphdiyne on Arbitrary Substrates with a Controlled-release Method
Chem. Comm. p. 1. (2018)

IF = 6.290

- 2018 Dorina Dobó, Dániel Sipos, András Sági, Gábor London, Koppány Juhász, Ákos Kukovecz, Zoltán Kónya

- Tuning the Activity and Selectivity of Phenylacetylene Hydrosilylation with Triethylsilane in the Liquid Phase over Size Controlled Pt Nanoparticles
 Catalysts 2018, 8(1), 22
 IF (2017)=3,465
- 2018 Fudong Liu, Hailiang Wang, Andras Sapi, Hironori Tatsumi, Danylo Zhrebetsky, Hui-Ling Han, Lindsay M. Carl, Gabor A. Somorjai
 Molecular Orientations Change Reaction Kinetics and Mechanism: A Review on Catalytic Alcohol Oxidation in Gas Phase and Liquid Phase on Size-Controlled Pt Nanoparticles
 Catalysts 8(6) (2018):226
 IF (2017)= 3,465
- 2018 András Sápi, Gyula Halasi, János Kiss, Dorina G. Dobó, Koppány L. Juhász, Vanessza J. Kolcsár, Zsuzsa Ferencz, Gábor Vári, Vladimír Matolin, András Erdőhelyi, Ákos Kukovecz, and Zoltán Kónya
 In Situ DRIFTS and NAP-XPS Exploration of the Complexity of CO₂ Hydrogenation over Size-Controlled Pt Nanoparticles Supported on Mesoporous NiO
J. Phys. Chem. C, **2018**, 122 (10), pp 5553–5565
 IF (2017)=4,484
- 2017 Attila Dékány, Enikő Lázár, Bálint Szabó, Viktor Havasi, Gyula Halasi, András Sápi, Ákos Kukovecz, Zoltán Kónya, Kornél Szőri, Gábor London
 Exploring Pd/Al₂O₃ Catalysed Redox Isomerisation of Allyl Alcohol as a Platform to Create Structural Diversity
 Catal. Lett. 147 (2017) 1834-1843.
 IF=2.799
- 2017 Hironori Tatsumi, Fudong Liu, Hui-Ling Han, Lindsay M. Carl, András Sápi, and Gabor A. Somorjai
 Alcohol Oxidation at Platinum-Gas and Platinum-Liquid Interfaces: The Effect of Platinum Nanoparticle Size, Water Coadsorption and Alcohol Concentration
J. Phys. Chem. C 121 (2017) 7365-7371.
 IF=4.536
- 2017 András Sápi, Albert Kéri, Ildikó Kálmista, Dorina G. Dobó, Ákos Szamosvölgyi, Koppány L. Juhász, Ákos Kukovecz, Zoltán Kónya, Gábor Galbács
 Determination of the Platinum Concentration of a Pt/Silica Nanocomposite Decorated with Ultra Small Pt Nanoparticles Using Single Particle Inductively Coupled Plasma Mass Spectrometry
J. Anal. At. Spectrom. 32 (2017) 996-1003.
 IF=3.379
- 2017 Dániel Sebok, László Janovák, Dániel Kovács, András Sápi, Dorina G. Dobó, Ákos Kukovecz, Zoltán Kónya, Imre Dékány
 Room temperature ethanol sensor with sub-ppm detection limit: Improving the optical response by using mesoporous silica foam
Sens. Act. B 243 (2017) 1205-1213.

- IF=5.401
- 2017 András Sápi, Dorina G. Dobó, Daniel Sebok, Gyula Halasi, Koppány L. Juhász, Akos Szamosvölgyi, Peter Pusztai, Erika Varga, Ildikó Kálomista, Gábor Galbács, Akos Kukovecz, and Zoltán Kónya
Silica Based Catalyst Supports Are Inert, Aren't They? – Striking Differences in Ethanol Decomposition Reaction Originated from Meso- & Surface Fine Structure Evidenced by Small Angle X-ray Scattering
J. Phys. Chem. C 121 (2017) 5130-5136.
- IF=4.536
- 2017 András Sápi, Andras Varga, Gergely Ferenc Samu, Dorina G. Dobó, Koppány L. Juhász, Bettina Takacs, Erika Varga, Akos Kukovecz, Zoltán Kónya, and Csaba Janáky
Photoelectrochemistry by Design: Tailoring the Nanoscale Structure of Pt/NiO Composites Leads to Enhanced Photoelectrochemical Hydrogen Evolution Performance
J. Phys. Chem. C 121 (2017) 12148-12158.
- IF=4.536
- 2017 Juan Gómez-Pérez, Dorina G. Dobó, Koppány L. Juhász, András Sápi, Henrik Haspel, Ákos Kukovecz, Zoltán Kónya
Photoelectrical response of mesoporous nickel oxide decorated with size controlled platinum nanoparticles under argon and oxygen gas
Catal. Today 284 (2016) 37- 43.
- IF=4.677
- 2016 R. Puskas, A. Sapi, A. Kukovecz, Z. Konya
Understanding the role of post-CCVD synthetic impurities, functional groups and functionalization-based oxidation debris on the behaviour of carbon nanotubes as a catalyst support in cyclohexene hydrogenation over Pd nanoparticles
RSC Advances 6 (2016) 88538-88545.
- IF=3.108
- 2016 A. Kormanyos, B. Endrődi, R. Ondok, A. Sapi, C. Janaky
Controlled photocatalytic synthesis of core-shell SiC/Polyaniline Hybrid Nanostructures
Materials 9 (2016) 201.
- IF=2.651
- 2015 R. Puskas, T. Varga, A. Grosz, A. Sapi, A. Oszko, A. Kukovecz, Z. Konya
Mesoporous carbon-supported Pd nanoparticles with high specific surface area for cyclohexene hydrogenation: Outstanding catalytic activity of NaOH-treated catalysts
Surf. Sci. 648 (2015) 114-119.
- IF=1.925
- 2014 A. Sapi, F. Liu, C. Xiaojun, C. M. Thompson, H. Wang, K. An, J. M. Krier, G. A. Somorjai
Comparing the Catalytic Oxidation of Ethanol at the Solid–Gas and Solid–Liquid Interfaces over Size-Controlled Pt Nanoparticles: Striking Differences in Kinetics and Mechanism

- Nano Lett. 14 (2014) 6727-6730.
IF=12.940
- 2014 H. Wang, K. An, A. Sapi, F. Liu, G. A. Somorjai
Effects of Nanoparticle Size and Metal/Support Interactions in Pt-Catalyzed Methanol Oxidation Reactions in Gas and Liquid Phases
Catal. Lett. 144 (2014) 1930-1938.
IF=2.244
- 2014 H. Wang, A. Sapi, C. Thompson, F. Liu, Zherebetsky D., J. M. Krier, L. M. Carl, Xiaojun C., L.-W. Wang, G.A. Somorjai
Dramatically Different Kinetics and Mechanism at Solid/Liquid and Solid/Gas Interfaces for Catalytic Isopropanol Oxidation over Size-Controlled Platinum Nanoparticles
J. Am. Chem. Soc. 136 (2014) 10515-10520.
IF=11.444
- 2014 A Sapi, C Thompson, H Wang, WD Michalak, WT Ralston, S Alayoglu, GA Somorjai
Recovery of Pt surfaces for ethylene hydrogenation-based active site determination
Catal. Lett. 144 (2014) 1151-1158.
IF=2.244
- 2014 D Madarasz, I Szent, A Sapi, J Halasz, A Kukovecz, Z Konya
Exploiting the ion-exchange ability of titanate nanotubes in a model water softening process
Chem. Phys. Lett. 591 (2014) 161-165.
IF=1.815
- 2014 MC Wu, HC Liao, YC Cho, CP Hsu, TH Lin, WF Su, A Sapi, A Kukovecz, Z Konya, A Shchukarev, A Sarkar, W Larsson, JP Mikkola, M Mohl, G Toth, H Jantunen, A Valtanen, M Huuhtanen, R Keiski, K Kordas
Photocatalytic activity of nitrogen-doped TiO₂-based nanowires: a photo-assisted Kelvin probe force microscopy study
J Nanopar. Res. 16 (2014) 2143
IF=2.175
- 2013 HL Wang, YH Wang, ZW Zhu, A Sapi, K An, G Kennedy, WD Michalak, GA Somorjai
Influence of Size-Induced Oxidation State of Platinum Nanoparticles on Selectivity and Activity in Catalytic Methanol Oxidation in the Gas Phase
Nano Lett. 13 (2013) 2976-2979
IF=13.025
- 2013 D Madarasz, G Potari, A Sapi, B Laszlo, C Csudai, A Oszko, A Kukovecz, A Erdohelyi, Z Konya, J Kiss
Metal loading determines the stabilization pathway for Co²⁺ in titanate nanowires: ion exchange vs. cluster formation
Phys. Chem. Chem. Phys. 15 (2013) 15917
IF=3.829

- 2013 G Pótári, D Madarász, L Nagy, B László, A Sápi, A Oszkó, A Kukovecz, A Erdőhelyi, Z Kónya, J Kiss
Rh-induced Support Transformation Phenomena in Titanate Nanowire and Nanotube Catalysts
LANGMUIR **29** (2013) 1
IF=4.186
- 2013 D Madarász, I Szenti, L Nagy, A Sápi, Á Kukovecz, Z Kónya
Fine tuning the surface acidity of titanate nanostructures
ADSORPTION-JOURNAL OF THE INTERNATIONAL ADSORPTION SOCIETY **1** (2013) 2
IF = 2.000
- 2012 Sz. Takács, A. Szabo, G. Oszlanczi, A. Sapi, Z. Konya, A. Papp
Repeated simultaneous cortical electrophysiological and behavioral recording in rats exposed to manganese-containing nanoparticles
Acta Biologica Hungarica **63** (2012) 426-440
IF = 0.593
- 2012 A. Papp, G. Oszlanczi, E. Horváth, E. Paulik, G. Kozma, A. Sápi, Z. Kónya, A. Szabó
Consequences of subacute intratracheal exposure of rats to cadmium oxide nanoparticles: Electrophysiological and toxicological effects
Toxic. Ind. Health **28** (2012) 933-941
IF = 1.423
- 2012 R. Puskas, A. Sapi, A. Kukovecz, Z. Konya
Comparison of Nanoscaled Palladium Catalysts Supported on Various Carbon Allotropes
Topics in Catalysis **55** (2012) 865-872
IF = 2.624
- 2012 M.-C. Wu, G. Tóth, A. Sápi, A.-R. Leino, Z. Konya, A. Kukovecz, W.-F. Su, K. Kordas
Synthesis and Photocatalytic Performance of Titanium Dioxide Nanofibers and the Fabrication of Flexible Composite Films from Nanofibers
J. Nanosci. and Nanotech. **12** (2012) 1421-1424
IF = 1.44
- 2012 T. Riittonen, E. Toukoniitty, D. K. Madhani, A. R. Leino, K. Kordas, M. Szabó, **A. Sápi**, K. Arve, J. Warna, J. P. Mikkola
One-pot liquid phase catalytic conversion of ethanol to 1-butanol over aluminium oxide – The effect of the active material on the selectivity
Catalysts **2** (2012) 68-84
IF = 0,000
- 2012 E. Horvath, Z. Mate, T. Takacs, P. Pusztai, A. Sapi, Z. Konya, L. Nagymajtenyi, A. Papp
General and Electrophysiological Toxic Effects of Manganese in Rats following Subacute Administration in Dissolved and Nanoparticle Form
Scientific World Journal DOI: 10.1100/2012/520632

IF = 0,000

- 2011 M. Darányi, I. Sarusi, A. Sápi, Á. Kukovecz, Z. Kónya, A. Erdőhelyi
Characterization of carbon thin films prepared by the thermal decomposition of spin coated polyacrylonitrile layers containing metal acetates
Thin Sol. Films (2011) 520 (2011) 57-63
IF = 1.909
- 2011 J. Maklin, N. Halonen, G. Tóth, A. Sápi, Á. Kukovecz, Z. Kónya, H. Jantunen, J.-P. Mikkola, K. Kordás
Thermal diffusivity of aligned multi-walled carbon nanotubes measured by the flash method
Phys. Status Solidi B (2011) pssc.201100143.R1 elfogadva
IF = 1.344
- 2011 N. Halonen, **A. Sápi**, L. Nagy, R. Puskás, A.-R. Leino, J. Maklin, J. Kukkola, G. Tóth, M.-C. Wu, H.-C. Liao, W.-F. Sung, A. Shchukarev, J.-P. Mikkola, Á. Kukovecz, Z. Kónya, K. Kordás
Low temperature growth of multi-walled carbon nanotubes by thermal CVD
Phys. Status Solidi B (2011) DOI: 10.1002/pssb.201100137
IF = 1.344
- 2011 M.C Wu, **A. Sápi**, A. Avila, M. Szabó, J. Hiltunen, M. Huuhtanen, G. Tóth, Á. Kukovecz, Z. Kónya, R. Keiski, W. F. Su, H. Jantunen, K. Kordás
Enhanced photocatalytic activity of TiO₂ nanofibers and their flexible composite films: Decomposition of organic dyes and efficient H₂ generation from ethanol-water mixtures
Nano Research 4 (2011) 360-369
IF = 5.071
- 2011 E. Horvath, G. Oszlanczi, Zs. Máté, A. Szabó, G. Kozma, **A. Sápi**, Z. Kónya, E. Paulik, L. Nagymajtényi, A. Papp
Nervous system effects of dissolved and nanoparticulate cadmium in rats in subacute exposure
J. Appl. Toxicology 31 (2011) 471-476
IF = 2.322
- 2011 G. Oszlanczi, A. Papp, A. Szabó, L. Nagymajtényi, **A. Sápi**, Z. Kónya, E. Paulik, T. Vezér
Nervous system effects in rats on subacute exposure by lead-containing nanoparticles via the airways
Inhalation Toxicology 23 (2011) 173-181
IF = 2.295
- 2011 M-C. Wu, J. Hiltunen, **A. Sápi**, A. Avila, W. Larsson, H.-C. Liao, M. Huuhtanen, G. Tóth, A. Shchukarev, N. Laufer, A. Kukovecz, Z. Konya, J.-P. Mikkola, R. Keiski, W.-F. Chen, H. Jantunen, P. M. Ajayan, R. Vajtai, K. Kordas
Nitrogen-Doped Anatase Nanofibers Decorated with Noble Metal Nanoparticles for Photocatalytic Production of Hydrogen
ACS NANO 5 (2011) 5025-5030

IF = 9.857

2011 D. Sranko, A. Pallagi, E. Kuzmann, S. E. Canton, M. Walczak, **A. Sápi**, Z. Kónya, Á. Kukovecz, P. Sipos, I. Pálinko

Synthesis and characteristic properties of novel Ba(II)Fe(III) layered double hydroxides (vol 48, pg 214, 2010)

Appl. Clay Sci. 52 (2011) 192-192

IF = 2.303

2010 G. Oszlanczi, E. Horváth, A. Szabó, E. Horváth, **A. Sápi**, G. Kozma, Z. Kónya, E. Paulik, L. Nagymajtényi, A. Papp

Subacute exposure of rats by metal oxide nanoparticles through the airways: general toxicity and neurofunctional effects

Acta Biologica Szegediensis 54 (2010) 165-170

IF = 0.000

2010 P.K. Seelam, M. Huuhtanen, **A. Sápi**, M. Szabó, K. Kordás, E. Turpeinen, G. Tóth, R.L. Keski
CNT-based catalysts for H₂ production by ethanol reforming

International Journal of Hydrogen Energy 22 (2010) 12588-12595

IF = 4.053

2010 D. Molnar, P. Heszler, R. Mingesz, Z. Gingl, A. Kukovecz, Z. Konya, H. Haspel, M. Mohl, **A. Sapi**, I. Kiricsi, K. Kordas, J. Mäklin, N. Halonen, G. Toth, H. Moilanen, S. Roth, R. Vajtai, P. M. Ajayan, Y. Pouillon, A. Rubio
Increasing chemical selectivity of carbon nanotube-based sensors by fluctuation-enhanced sensing

FNL 9 (2010) 277-287

IF = 0.317

2010 A. Dombovari, N. Halonen, **A. Sapi**, M. Szabo, G. Toth, J. Mäklin, K. Kordas, J. Juuti, H. Jantunen, Á. Kukovecz, Z. Kónya

Moderate anisotropy in the electrical conductivity of bulk MWCNT/epoxy composites

CARBON 48 (2010) 1918-1925

IF = 4.893

2010 N. Halonen, A. Rautio, AR. Leino, T. Kyllönen, G. Toth, J. Lappalainen, K. Kordas, M. Huuhtanen, R. L. Keiski, **A. Sapi**, M. Szabo, Z. Kónya, Á. Kukovecz, K. Kordás, I. Kiricsi R. Vajtai, P. M. Ajayan

Three-Dimensional Carbon Nanotube Scaffolds as Particulate Filters and Catalyst Support Membranes

ACS NANO 4 (2010) 2003-2008

IF = 9.855

2010 D. Sranko, A. Pallagi, E. Kuzmann, S. E. Canton, M. Walczak, **A. Sápi**, Z. Kónya, Á. Kukovecz, P. Sipos, I. Pálinko

Synthesis and properties of novel Ba(II)Fe(III) layered double hydroxides

Appl. Clay Sci. 48 (2010) 214-217

IF = 2.303

- 2010 Á. Kukovecz, D. Molnár, K. Kordás, Z. Gingl, H. Moilanen, R. Mingesz, Z. Kónya, J. Mäklin, N. Halonen, G. Tóth, H. Haspel, P. Heszlér, M. Mohl, **A. Sági**, S. Roth, R. Vajtai, P. M. Ajayan, Y. Pouillon, A. Rubio, I. Kiricsi
Carbon nanotube based sensors and fluctuation enhanced sensing
Phys. Status Solidi C 7 (2010) 1217–1221
IF = 0.000
- 2010 C. Janaky, B. Endrodi, K. Kovacs, M. Timko, **A. Sági**, C. Visy
Chemical synthesis of poly(3-thiophene-acetic-acid)/magnetite nanocomposites with tunable magnetic behaviour
Synth. Metals 160 (2010) 65-71
IF = 1.871
- 2009 R. Remias, A. Sapi, R. Puskas, Z. Kónya, Á. Kukovecz, I. Kiricsi
Adsorption of C6 hydrocarbon rings on mesoporous catalyst supports
Chem. Phys. Lett. 482 (2009) 296-301
IF = 2,291
- 2009 **A. Sági**, R. Rémiás, Z. Kónya, Á. Kukovecz, K. Kordás, I. Kiricsi
Synthesis and characterization of nickel catalysts supported on different carbon materials
RKCL 96 (2009) 379-389
IF=0,557
- 2008 L. Sárközi, E. Horváth, A. Szabó, E. Horváth, **A. Sági**, G. Kozma, Z. Kónya, A. Papp
Neurotoxic effects of metal oxide nanoparticles on the somatosensory system of rats following subacute intratracheal application
CEJOEM 14 (2008) 277-290
IF = 0,000
- 2008 **Sapi A.**
Több figyelmet a műanyagoknak!
A Kémia Tanítása 1 (2008) 16-26
IF = 0,000
- 2007 R. Smajda, Z. Gyóri, **A. Sági**, M. Veres, A. Oszkó, J. Kis-Csitári, Á. Kukovecz, Z. Kónya, I. Kiricsi
Spectroscopic studies on self-supporting multi-wall carbon nanotube based composite films for sensor applications
J. Mol. Struct. 834-836 (2007) 471-476
IF = 1,440
- 2006 András Sági

Building up a system based on periodic method for measuring thermal properties of nanocomposites
ISBN: (10)973-638-254-0 April, 2006
IF = 0,000

B) Book chapters

- 2012 K Kordas, J Kukkola, G Toth, H Jantunen, M Szabo, A Sapi, A Kukovecz, Z Konya, JP Mikkola
Nanoparticle Dispersions
Vajtai R (ed.): Springer Handbook of Nanomaterials; 729-776. Berlin, Hiedelberg, Springer, ISBN: 978-3-642-20594-1
- 2010 **A. Sapi**, R. Remias, A. Kukovecz, I. Palinko, Z. Konya, I. Kiricsi
9. Fundamental aspects of the synthesis, modification, characterization and catalytic testing of various silicate forms and metal nanoparticle-mesoporous silicate composite materials
Istvan Halasz: Silica and silicates in modern catalysis; Chapter 9. 187-212, ISBN: 978-81-7895-455-4, 2010

C) Posters

- 2018 Szamosvölgyi Ákos, Sági András, Ákos Kukovecz^{1,3}, Zoltán Kónya
Synthesis and characterization of monodisperse platinum nanoparticles with various approaches
SIWAN8, 8th Szeged International Workshop on Advances in Nanoscience, Szeged, Hungary October 7-10, 2018.
- 2018 Imre Szenti¹, András Sági¹, Upendar Kashaboina¹, Juan Fernando Gomez Perez¹, Gyula Halasi¹, János Kiss², Tamás Varga¹, Ákos Kukovecz^{1,3}, Zoltán Kónya^{1,2}
Controlled Sized Platinum Nanoparticles Supported on H-ZSM-5 Catalyst for Efficient CO₂ Hydrogenation: Role of interfacial sites in high activity
SIWAN8, 8th Szeged International Workshop on Advances in Nanoscience, Szeged, Hungary October 7-10, 2018.
- 2018 Ádám Nyitrai, András Sági, Ákos Kukovecz, Zoltán Kónya
SYNTHESIS AND CHARACTERIZATION OF CONTROLLED-SIZE CU NANOPARTICLES
24nd International Symposium on Analytical and Environmental Problems Szeged, Hungary October, 2018
- 2018 Anastasiia Efremova, András Grósz, Anett Gyuris, Marietta Orosz-Ábel, András Sági, Ákos Kukovecz, Zoltán Kónya
A comparative study on catalytic carbon dioxide hydrogenation and carbon dioxide methanation over Pt/SBA-15, NiO, Pt/NiO, Co₃O₄ catalysts
24nd International Symposium on Analytical and Environmental Problems Szeged, Hungary October, 2018
- 2018 Anett Gyuris, András Sági, Ákos Kukovecz, Zoltán Kónya
Synthesis and Characterization of 3D Mesoporous Transient Metal Oxide For High-Performance Catalysts
24nd International Symposium on Analytical and Environmental Problems Szeged, Hungary October, 2018
- 2017 Juhász Koppány Levente, Dobó Dorina, Sipos Dániel, Sági András, Kukovecz Ákos, Kónya Zoltán
Méretkontrollált nanorészecskék alkalmazása heterogén katalitikus folyamatokban
XI. Országos Anyagtudományi Konferencia, Balatonkenese, 2017. október 15-17.
- 2017 Gyula Halasi, András Sági, János Kiss, Dorina Dobó, Kornélia Baán, Koppány Juhász, Zoltán Kónya

- Molecular level exploration of the complexity of hydrogenation of CO₂ over size controlled Pt nanoparticles supported on mesoporous NiO by in-situ DRIFTS and NAP-XPS techniques
33RD European Conference on Surface Science, Szeged, Hungary, 27 Aug-1 Sep 2017.
- 2016 D. Sebők, A. Sági, D. G. Dobó, Á. Kukovecz, Z. Kónya, L. Janovák, I. Dékány
Low ppm-range reflectometric ethanol sensor at room temperature: improving the optical response by using mesoporous materials
SIWAN7, 7th Szeged International Workshop on Advances in Nanoscience, Szeged, Hungary October 12-15, 2016.
- 2016 I. Kálomista, A. Kéri, Á. Szamosvölgyi, D. Dobó, K. Juhász, A. Sági, G. Galbács, Á. Kukovecz, Z. Kónya
Optimization of SP-ICP-MS instrumental parameters for the measurement of surface modified nanoparticles
SIWAN7, 7th Szeged International Workshop on Advances in Nanoscience, Szeged, Hungary October 12-15, 2016
- 2016 Koppány L. Juhász, D. Dobó, M. Szabó, A. Sági, Á. Kukovecz, Z. Kónya
Size-controlled platinum nanoparticles: fabrication, characterization and application in heterogenous catalytic processes
SIWAN7, 7th Szeged International Workshop on Advances in Nanoscience, Szeged, Hungary October 12-15, 2016.
- 2016 Juan Gómez-Perez, Dorina G. Dobó, Koppány L. Juhász, András Sági, Henrik Haspel, Zoltán Kónya, Ákos Kukovecz
Understanding the photoelectrical response of mesoporous nickel oxide decorated with controlled size platinum nanoparticles in different atmospheres
SIWAN7, 7th Szeged International Workshop on Advances in Nanoscience, Szeged, Hungary October 12-15, 2016
- 2016 Ákos Szamosvölgyi, Koppány Levente Juhász, András Sági, Mária Szabó, Dorina Dobó, Ákos Kukovecz, Zoltán Kónya
Synthesis and characterization of platinum nanoparticles in a wide range of size
22nd International Symposium on Analytical and Environmental Problems Szeged, Hungary October 10, 2016.
- 2016 Dániel Sebők, László Janovák, András Sági, Dorina G. Dobó, Ákos Kukovecz, Zoltán Kónya, Imre Dékány
Room temperature ethanol sensor with sub-ppm detection limit: improving the optical response by using mesoporous silica foam
22nd International Symposium on Analytical and Environmental Problems Szeged, Hungary October 10, 2016
- 2016 Albert Kéri, Ildikó Kálomista, Ákos Szamosvölgyi, Dorina Dobó, Koppány Juhász, András Sági, Ákos Kukovecz, Zoltán Kónya, Gábor Galbács
Investigation of Pt/SiO₂ nanoparticles by solution and single particle mode ICP-MS

- 22nd International Symposium on Analytical and Environmental Problems Szeged, Hungary October 10, 2016.
- 2016 Dániel Sipos, Dorina Dobó, András Sági
Liquid Phase Hydrosilylation over Size-Controlled Pt Nanoparticles
22nd International Symposium on Analytical and Environmental Problems Szeged, Hungary October 10, 2016.
- 2016 Dorina G. Dobó, András Sági, Gyula Halasi, Dániel Sebők, Koppány L. Juhász, Ákos Kukovecz, Zoltán Kónya
Study of 1.8 nm Pt nanoparticles anchored on different amorphous silica supports in ethanol decomposition reaction
22nd International Symposium on Analytical and Environmental Problems Szeged, Hungary October 10, 2016
- 2015 Koppány Levente Juhász, M. Szabo, D. Dobo, A. Szamosvolgyi, E. Lazar, T. Varga, A. Sapi, A. Kukovecz, Z. Konya
Synthesis and Characterization of Pt Nanoparticles with Controlled Size for Catalytic Applications
P88, poster, 21st International Symposium on Analytical and Environmental Problems, Szeged, 2015.09.28.
- 2015 K.L. Juhász, M. Szabo, A. Szamosvolgyi, D. Dobo, A. Sapi, A. Kukovecz, Z. Konya
Synthesis and Characterization of Platinum Nanoparticles with Controlled Size for Heterogen Catalytic Processes
A57, poster, 11th Conference for Young Scientists in Ceramics, Novi Sad, 2015.10.23.
- 2015 **A. Sági**, H. Wang, C. Thompson, K. Juhász, D. Dobó, M. Szabó, G. A. Somorjai, Z. Kónya
Dramatically Different Mechanism and Kinetics at Solid/Gas and Solid/Liquid Interfaces for Alcohol Oxidation over Size-Controlled Pt Nanoparticles
MCM 2015, Eger, Hungary, 2015
- 2011 **A. Sági**, L. Nagy, Á. Kukovecz, K. Kordás, G. Tóth, Z. Kónya
Low temperature CVD synthesis of multiwall carbon nanotubes
IWEPNM 2011, Kirchberg in Tirol, Austria, 2011
- 2011 M. Szabó, M. C. Wu, M. Mohl, **A. Sági**, G. Tóth, K. Kordás, Á. Kukovecz, Z. Kónya
Tungsten oxide and titanium dioxide nanowires – Preparation, doping and application
IWEPNM 2011, Kirchberg in Tirol, Austria, 2011
- 2010 Aron Dombovari, Niina Halonen, **Andras Sapi**, Maria Szabo, Geza Toth, Jani Mäklin, Krisztian Kordas, Jari Juuti, Heli Jantunen, Akos Kukovecz, Zoltan Konya
Moderate electrical anisotropy in aligned multi-walled carbon nanotube forests and carbon nanotube/epoxy composites
NGS Meeting, Jyväskylä, Finland, 2009.06.17 – 2009.06.18
- 2009 Jarmo Kukkola, Jani Mäklin, Niina Halonen, Krisztián Kordás, Melinda Mohl, **Andras Sapi**, Akos Kukovecz, Zoltan Konya, Imre Kiricsi, Ashavani Kumar, Arava Leela Mohana Reddy, Robert Vajtai, Pulickel M. Ajayan
Electrical properties and gas sensitivity of nickel-palladium nanowire thin films
Nanoscience days, Jyväskylä, Finland, 2009.10.29 – 2009.10.30

- 2009 N. Halonen, T. Kyllönen, G. Tóth, K. Kordás, M. Huuhtanen, R. L. Keiski, **A. Sápi**, M. Szabó, Á. Kukovecz, Z. Kónya, R. Vajtai, P. M. Ajayan
Multi-walled carbon nanotubes grown in 3-dimensional templates: Facile route towards novel membrane-type catalyst support materials
Nanoscience days, Jyväskylä, Finland, 2009.10.23 – 2009.10.24
- 2008 M. Huuhtanen, E. Turpeinen, P. K. Seelam, R. L. Keiski, **A. Sápi**, M. Szabó, K. Santosh, N. Halonen, G. Toth, K. Kordas
Carbon nanotube based catalysts for ethanol reforming and hydrogen fuel cells
Nanoscience days, Jyväskylä, Finland, 2009.10.23 – 2009.10.24
- 2007 Jozsef Szel, Endre Horvath, **Andras Sapi**, Akos Kukovecz, Zoltan Konya, Imre Kiricsi
On the morphology and transport properties of HDPE-titanate nanowire nanocomposites
IWEPNM 2007, Kirchberg in Tiro, Austria, 2007.03.10 – 2007.03.17
- 2006 R. Smaida, Z. Győri, **A. Sápi**, M. Veres, A Oszkó, J. Kis-Csitári, Á. Kukovecz, Z. Kónya, I. Kiricsi
Spectroscopic studies on self-supporting multi-wall carbon nanotube based composite films for sensor applications
XXVIII EUCMOS (2006), Istanbul, Turkey, 2006.09.03 – 2006. 09. 08

D) Invited Lectures

- 2019 Catalysis Tailoring: Nanostructures and Molecular Level Understanding Towards High Activity and Selectivity
National Conference On Materials & Nanotechnology: Ideas, Innovation & Initiatives NCMN-2019
Feb 15-16, 2019, GLA UNIVERSITY, MATHURA, India
- 2019 Photocatalytic application of modified one-dimensional titanate nanostructures
International Conference On "Efficient Solar Power Generation And Energy Harvesting" (An Industry & Academia Meet)
12th - 14th February, 2019, Amity University, Noida, India
- 2018 *Catalysis Tailoring: Nanostructures and Molecular Level Understanding Towards High Activity and Selectivity*
14TH PANNONIAN INTERNATIONAL SYMPOSIUM ON CATALYSIS
3-7 SEPTEMBER 2018, STARÝ SMOKOVEC, HIGH TATRAS, SLOVAK REPUBLIC – Keynote lecture
- 2015 3D Mesoporous Oxide Supported Platinum Nanoparticles for Heterogenous Catalytic Applications – Gas vs. Liquid Phase Reactions
11th Conference for Young Scientists in Ceramics, 2015, Novi Sad, Serbia

E) Oral lectures

- 2018 Tervezett Katalízis: Nano- és in-situ technológiákkal a nagy aktivitás és szelektivitás felé
Katalízis Nap - Catalysis day, 2018.03.21., Szeged, Hungary
- 2018 Tényleg inert a szilika?; Kiszögű röntgenszórás alkalmazása a felület kémiában
MTA Felületkémiail és Nanoszerkezeti Munkabizottság tisztújító ülése, 2018. Március 6. – MTA EK MFA, KFKI
- 2017 Silica based catalyst supports are inert, are they not? - Striking differences in ethanol decomposition reaction originated from meso- & surface fine structure evidenced by small angle x-ray scattering
ECOSS 33, Szeged, Hungary
- 2017 Tervezett katalízis: Nanotechnológiával a nagy aktivitás és szelektivitás irányában
Celebrating Hungarian Science MTA „Intelligent Materials”, Szeged, Hungary
- 2017 Tervezett katalízis: Nano- és in-situ technológiákkal a nagy aktivitás és szelektivitás felé
MTA Katalízis Munkabizottsági gyűlés, Szeged, Hungary,
- 2015 Dópolt titanát nanoszerkezetek előállítás és fotokatalitikus tulajdonságai (Synthesis and photocatalytic properties of doped titanate nanostructures)
Celebrating Hungarian Science, „Role of light in chemical reactions”, Szeged, Hungary
- 2015 Comparing Catalytic Alcohol Oxidation at the Solid-Gas and Solid-Liquid Interfaces over Size-Controlled Platinum Nanoparticles
*Seminar on „Selected synthesis, detection methods and applications of nanomaterials”
University of Oulu, Finland*
- 2015 “Comparing Catalytic Alcohol Oxidation at the Solid-Gas and Solid-Liquid Interfaces over Size-Controlled Platinum Nanoparticles: Striking Differences in Kinetics and Mechanism”
PHYSIKALISCH-CHEMISCHEN und funCOS KOLLOQUIUM, Erlangen, Germany
- 2011 Mechanical resistance of titanate nanowires
10th Multinational Congress on Microscopy 2011, Urbino, Italy
- 2011 One dimensional titanate nanostructures
EuroNanoForum 2011, Budapest, Hungary
- 2011 Synthesis of nanoparticles based on high energy methods
Szeged, Hungary
- 2011 Synthesis and catalytic applications of metallic nanoparticles
TÁMOP 4.2.2.-08/1/08/1/2008-0016 project lectures; Dunaújváros, Hungary
- 2010 Ex situ and In situ TEM examination of CNT modification
Magyar Mikroszkópos Konferencia, Siófok, Hungary
- 2009 Különböző NiO/CNT nanokompozitok szintézise és vizsgálata (Synthesis and characterisation of various NiO/CNT nanocomposites)
Magyar Mikroszkópos Konferencia, Siófok, Hungary

- 2008 Ni/C nanokompozitok előállítás és katalitikus tulajdonságainak vizsgálata (Preparation and catalytic activity study of Ni/C nanocomposites)
MTA Katalízis Munkabizottság gyűlése, Szeged, Hungary
- 2007 Nanokompozitok termikus tulajdonságainak mérésére alkalmas műszer fejlesztése (System for thermal properties measurements)
XXVIII. OTDK, Szeged, Hungary
- 2006 Developing a system for measuring thermal properties of nanocomposites
XI. Természettudományi ETDK, Temesvár, Romania
- 2006 Periodikus módszeren alapuló rendszer kialakítása nanokompozitok termikus tulajdonságainak mérésére (System based on a periodic method for thermal analysis of nanocomposites)
VIII. Temesvári Műszaki TDK, Temesvár, Romania

F) Patents

- 2014 Gel Composition for cleaning pipes and pipelines and the use thereof
HU1400300
- 2014 Gel Composition for cleaning pipelines and pipe-networks and the use thereof
WO2014203014
- 2012 Photocatalytic material
WO2012052624

2. Educational Journey

- 2015 *Department of Physical Chemistry II., FAU Erlangen-Nuremberg, Germany (1 month)*
- 2012-2014 *UC Berkeley, Lawrence Berkeley National Laboratory, University of California, USA (2 years)*
- 2009 *Microelectronics and Material Physics Laboratories, University of Oulu, Finland (2 month)*
- 2008 *Microelectronics and Material Physics Laboratories, University of Oulu, Finland (2 month)*
- 2007 *Microelectronics and Material Physics Laboratories, University of Oulu, Finland (3 month)*

3. Education

A) Course

Environmental Technology lecture
Synthesis and application of nanomaterials in english
Basic and nanotechnology seminar in english

Selective waste collection laboratory
 Nanotechnology and material study laboratory
 Chemical industrial procedures and machines seminary
 Chemical technology laboratory
 Environmental technology laboratory
 Environmental technical procedures and machines (lecture&seminar)
 Nanotechnology seminar and laboratory
 Basics of microscopy laboratory
 Bulk and Surface Investigation Methods (lecture&seminar)

B) Thesiswork supervising

2018-	10 BSc and/or MS students/yr – on the field of environmental chemistry and heterogeneous catalysis
2017	Ákos Szamosvölgyi (Chemist MSc) Tetszőlegesen hangolható tandem katalizátor nanorészecskék előállítása oligonukleotidok felhasználásával
2017	András Grósz (Chemist MSc) Application of platinum/cobalt-oxide interfaces in heterogeneous catalytic reactions
2016	Roland Bálint (Chemist BSc) Fine tuning of Metal/Metal oxide interfaces
2016	Dániel Berkesi (Chemist MSc) Synthesis of Pt/CoOx nanostructures for heterogeneous catalysis
2016	József Dusnoki (Molecular Bionics BSc) Hydrophobic titanate nanotubes for self-cleaning paints
2016	József Dusnoki (Molecular Bionics BSc) Hydrophobic titanate nanotubes for self-cleaning paints
2016	Bálint Szabó (Environmental Chemistry MSc) in-situ IR investigation of allyl-alcohol oxidation over Pt/Al ₂ O ₃ and Pd/Al ₂ O ₃
2016	Dániel Sipos (Chemist BSc) Liquid phase hydrosilylation over size controlled Pt nanoparticles
2016	László Boda (Environmental Engineer BSc) Synthesis and characterization of 3D Mesoporous Oxide Supports by soft and hard template methods
2016	Enikő Lázár (Environmental Chemistry MSc) Planning and investigation of allyl-alcohol oxidation over size controlled Pt nanoparticles in a plug flow gas reactor
2015	Ákos Szamosvölgyi (Chemist BSc) Synthesis and characterization of Pt nanoparticles with controlled size
2011	Cynthia Veliz (Erasmus Student, Chemical Engineer Msc)

2011	Tuning of Ag/TiONW nanocomposites for antibacterial application Márton Szabados (Chemist BSc) Self-cleaning coatings based on titanate nanowires
2011	Gábor Reszler (Environmental Sciences) Synthesis and characterization of expanded graphite – Probable methods for grapheme preparation
2011	László Papdi (Chemist BSc) Experimentals with graphite
2010	Bernadett Ferger (Chemist BSc) Synthesis and characterization of titanate nanotube/diltiazem drug nanocomposites
2010	István Gál (Material Sciences BSc) Synthesis, characterization and mechanical resistance of titanate nanowires
2010	Imre Szenti (Chemist BSc) Exploiting of ionic exchange properties of titanate nanotubes
2009	Zoltán Ádám (Chemist BSc) Synthesis, characterization and photocatalytic activity of silver/titanate nanowires
2009	Ágnes Medgyesi (Environmental Sciences) Synthesis and characterization of Ag/CNT nanocomposites

C) Project and plan works

2018-	10 BSc and/or MS students/yr – on the field of environmental chemistry and heterogeneous catalysis
2017	Viktória Kozma (Chemist MSc) Synthesis and characterization of size controlled Cu nanoparticles for heterogeneous catalysis
2017	Vanessza Kolcsár (Chemist MSc) Size controlled Pt nanoparticles anchored onto the surface of mesoporous oxide in CO ₂ reduction
2016	Csaba Kreininger (Chemist MSc) Synthesis of size controlled Pt-based mono and bimetallic nanoparticles
2016	Kriszta Pencz (Chemist MSc) Synthesis of size controlled Cu nanoparticles
2016	Dániel Berkesi (Chemist MSc) Synthesis of Pt/CoO _x Janus nanoparticles
2016	Mihály Hambalgo (Chemist MSc) Effect of reaction conditions for WO ₃ nanowire synthesis
2015	Enikő Lázár (Environmental Engineer MSc) Planning a gas phase flow reactor system for testing nanoparticles in heterogenous catalysis
2015	László Boda (Environmental Engineer BSc) Synthesis and characterization of 3D Mesoporous Oxide Supports
2011	Andrea Csépanyi (Environmental Sciences BSc)

	Planning of a system for fluidisation
2008	László Nagy (Chemist)
	Synthesis and functionalisation of CNTs
2008	Ágnes Medgyesi (Environmental Sciences)
	Synthesis and characterization of Silver supported on CNTs

4. Awards

2017:	Dr. Paál Zoltán Catalyst Research Prize
2016:	OTKA Postdoctoral Scholarship
2016:	Új Nemzeti Kiválóság Program – Postdoctoral Scholarship
2015:	Campus Hungary Scholarship
2014:	Bolyai Janos Research Grant
2011:	Hungarian Academy of Sciences, “NanoDemo”, <i>Idea award</i>
2007:	XXVIII. OTDK, Szeged <i>1. award</i>
2007:	XXVIII. OTDK, Szeged <i>Extra award of Magyary Zoltán Foundation</i>
2006:	11. Environmental Science ETDK, Timisoara
2006:	TDK, Szeged <i>2. award</i>
2006:	8. Technical TDK, Timisoara, <i>Extra award</i>

5. PhD. Thesis Defense Participation

2019	Secretary at Péter Bába (Doctoral School of Environmental Sciences)
2019	Opponent at Dr. Budán Ferenc Csaba (University of Pecs)
2018	Secretary at Tóth-Szeles Eszter (Doctoral School of Environmental Sciences)
2017	Secretary at Krisztina Kovács (Doctoral School of Chemistry)
2017	Opponent at Attila Gácsi (Doctoral School of Chemistry)
	STRUCTURE AND EQUILIBRIA OF SOME CA(II)-COMPLEXES FORMING IN HYPERALKALINE AQUEOUS SOLUTIONS
2016	Secretary at Szabolcs Tallósy (Doctoral School of Environmental Sciences)
	Reaktív hibrid nanokompozit felületek antibakteriális hatása

- 2016 Opponent at
Zsolt Ferencz (Doctoral School of Chemistry)
Mechanochemical Preparation and structural characterization of layered double hydroxides and their amino acid-intercalated derivatives
- 2015 Secretary at
Emese Szabó (Doctoral School of Environmental Sciences)
The development and characterization of adsorption and combined methods for the removal of organic contaminants from water
- 2015 Secretary at
László Zsolt Kiss (Doctoral School of Environmental Sciences)
„Előkezelések szűrési paraméterekre gyakorolt hatásának vizsgálata olajtartalmú szennyvizek illetve termálvizek membránszűrése során”
- 2015 Secretary at
Andrea Cecília Badari (Doctoral School of Environmental Sciences)
"Szerves nitrogénvegyületek katalitikus hidrodenitrogénezése (HDN) hordozós nikkell-foszfid katalizátorokon"

6. Membership

- 2020-: Springer, RKMC, Associate Editor
- 2018-: MTA Surface Science and Nanostructure Workassociation
- 2016-: SzTE-TTIK, KMI member, Quality and Educational Association Member
- 2016-: American Chemical Society
- 2015-: SZAB Chemistry Association – Material Science Work association
- 2008- : Hungarian Society for Microscopy
- 2008- : MTA Catalytic Work association

7. Scientific projects and supervising

2020-2022: 2019-2.1.11-TÉT-2019-00090, Nem szokványos katalizátor hordozókkal egy Zöldebb jövőért: Hangolható hierarchikus pórusú polimerek alkalmazása kontrollált méretű fém nanorészecskék hordozójaként CO aktiválási és C-C formálási reakciókban – Szakmai Vezető (Project Leader)

2020-2023: PIACI-KFI-2019-00349, Hierarchikus kamraszerkezetű, kompozit, expandált polisztirol termékek, és gyártástechnológiájuk kifejlesztése – Szakmai Vezető (Project Leader)

2019-2020: EFOP-3.6.1-16-2016-00014 azonosító számú „Diszruptív technológiák kutatásfejlesztése az e-mobility területén és integrálásuk a mérnökképzésbe” – Senior Kutató

2017 – 2020: GiNOP 2.2.1. : Ipari füstgázok károsanyag tartalmát csökkentő technológia kidolgozása új módosított felületű kaolinit agyagásvány és zeolit kompozit katalizátorok fejlesztésével – Project Leader

2016 - 2017: ÚNKP-2016-4: 5 nm Pt/Mezopórusos NiO *in-situ* atomi és molekuláris szintű vizsgálata CO₂ hidrogénezési reakcióban – Project Leader

2016 – 2019: TÉT_15_IN-1-2016-0013: Új típusú BiOX (X = Cl, Br, I) BiOX kompozitok környezetbarát előállítás, immobilizálása aktív szénszál/kerámiapapír felületén hatékony és újrahasznosítható fotokatalitikus felületek kialakítására – Senior Kutató

2016 – 2020: OTKA PD: Using interfaces of Pt/CoO_x Janus nanoparticles and other complex structures for heterogeneous catalytic CO₂ and ethanol activation – Project Leader

2015-2018: OTKA NKFI-6: Interactions between ferroelectric core-shell nanospheres and autocatalytic front reactions – Towards developing combined visual/RFID sensor labels utilizing pH-change based responses – Senior researcher

2014-present: SzTE-TTIK Department of Applied and Environmental Chemistry: Research on surface science and catalysis with size controlled nanoparticles and 3D mesoporous oxides

2012-2014: UC Berkeley, Lawrence Berkeley National Laboratories, Division of Material Science, Department of Surface Science: Nobel metal nanoparticles in alcohol oxidation

2010-2012: EC FP7 "THEMA-CNT" project: Low temperature carbon nanotube synthesis

2007- : Collaboration with OKFT Kft.: Gel pigs in cleaning of pipelines

2006-2009: EC FP6 STREP "SANES" project: Functionalization of carbon nanotubes

2008-2012: Collaboration with SzTE-ÁOK Department of Public Health: Health effects of nanoparticles

2008-: SzTE-TTIK Department of Applied and Environmental Chemistry: Research, thesis work supervising based on carbon nanotubes, titanate nanostructures, nanoparticles and heterogeneous catalysis

2007-2009: Collaboration with University of Oulu (Finland) Microelectronics and Material Science Laboratories: Nanoparticles/Carbon nanotube composites for heterogeneous catalysis



Szeged, 11st of September, 2020.