PERSONAL INFORMATION

Dr. Kolev, Hristo Gospodinov

Bulgarian Academy of Sciences, 67 "Shipchenski prohod" str., 1574 Sofia, Bulgaria

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Sex Male | Date of birth | Nationality Bulgarian

WORK EXPERIENCE

2014-present — Associate Professor

Institute of Catalysis – Bulgarian Academy of Sciences; 11, Acad. G. Bonchev Str, 1113 Sofia, Bulgaria;

- Scientific research and experimental work; Surface Science Analysis, Equipment support

Business or sector Science

2004-2014 — Assistant Professor

Institute of Catalysis – Bulgarian Academy of Sciences; 11, Acad. G. Bonchev Str, 1113 Sofia, Bulgaria;

- Scientific research and experimental work; Surface Science Analysis, Equipment support

Business or sector Science

2010-present — Software Expert

Institute of Metal Science, Equipment and Technologies "Acad. A. Balevsci" with Haydroaerodinamics centre - Bulgarian Academy of Sciences, 67 "Shipchenski prohod" str., 1574 Sofia, Bulgaria;

- Software development, Mathematical data processing, Sensory array development

Business or sector Science

2000 – 2005 — PhD student

Physikalisches Institute in Westfälische Wilhelms-Univerität Münster, Germany.

- Scientific research and experimental work; Publication of scientific papers, PHD work

Business or sector Science

1999 – 2000 — Physicist

Institute of General and Inorganic Chemistry, Bulgarian Academy of Sciences, 11, Acad. G. Bonchev Str, 1113 Sofia, Bulgaria;

- Scientific research and experimental work; Publication of scientific papers.

Business or sector Science

1998 – 1999 — System engineer

Makronet SC, Sofia, Bulgaria;

- Production, control and installation of electronic electrometers with communication through electrical net system

Business or sector Engineering

EDUCATION AND TRAINING

01.2012 – 02.2012

Starting a business 50 hours

The Business Institute, Joliot-Curie Street 23A, 1113 Sofia, Bulgaria

2009 (2000 - 2005)

Doctor in physics (PhD Student)

Westfälische Wilhelms-Univerität Münster, Germany.

1993 - 1998

MSc, engineer physicist (microelectronics and information technology),

Sofia University “st. Kliment Ohridski”, Sofia, Bulgaria.

2006

Specialization - School on Synchrotron Radiation and Application,

ABDUS SALAM International Centre for Theoretical Physics, Trieste, Italy.

1988 - 1993

High school

D. Chintulov high school, Department Mathematic with intensive education in English, Sliven, Bulgaria.

PERSONAL SKILLS

Mother tongue(s): Bulgarian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	B2
German	C1	C1	C1	C1	B2
Russian	C1	C1	B1	B1	**B1**

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Communication skills

Membership in professional organizations:

- Bulgarian Society for Non-Destructive Testing
- Bulgarian Catalysis Club

Guidance to Diploma students and PhD Student
Participation in scientific research projects
Good presentation skills

Organisational / managerial skills

Guidance to Diploma students and PhD Student
Participation in scientific research projects

Job-related skills	Experience in using several experimental techniques for investigation of the surface of the samples. Examples are X-ray Photoelectron Spectroscopy, Auger Electron Spectroscopy, Low Energy Electron Diffraction, Magneto-optical Kerr Effect, and Spin-Resolved Appearance Potential Spectroscopy. Producing and working with spin-polarized electrons. Most of these techniques need ultrahigh vacuum conditions, i.e., I have experience in working with UHV. MBE thin films growth of single element and alloying different elements. Sensor development and control. Data acquisition and analysis. Preparation of scientific papers and presentations.
Computer skills	Hardware, Software, Programming: HTML, XML, CSS, 3DMLW, Turbo Pascal, C and Embedded C, experience with Blender 3D animation programme. LaTeX, MS –OFFICE, Corel Draw, Origin, Open Office, Internet, LAN administration assistance. WinXX, Linux. Antivirus software. Participation in several 3D animation projects with preparation of 3D movies. Participation in preparation and updating of several websites.
Driving licence	Yes (B and M since 1999)

ADDITIONAL INFORMATION

Publications	Co-author in 33 scientific publications (95 citations).
Presentations and Conferences	Participation of more than 40 national and international scientific reports, conferences and workshops.
Projects	Participation in 12 national and international (EU, Germany, Italy, Romania, India) scientific projects.
Honours and awards	• First prize of the competition for the best theoretical and applied research in honor of May 24, 2011, Institute of Metal Science, equipment, and technologies “Acad. A. Balevski” with Center for Hydro- and Aerodynamics – BAS. • Second prize of the competition for the best theoretical and applied research in honor of May 24, 2013, Institute of Metal Science, equipment, and technologies “Acad. A. Balevski” with Center for Hydro- and Aerodynamics – BAS.
Memberships	Bulgarian Society for Non-Destructive Testing Bulgarian Catalysis Club

ANNEXES

List of publications

h index (Scopus) =5, (ISI Web of Knowledge) =6 (02.06.2013)
Papers: 33 citations: 95

1. N Shtinkov, V Donchev, K Germanova and **H Kolev**,
Electronic structure of quantum wells embedded in short-period superlattices with graded interfaces,
Semicond. Sci. Technol. **15** (2000) 946–949.
2. B. Tsyntsarski, V. Avreyska, **H. Kolev**, Ts. Marinova, D. Klissurski, K. Hadjiivanov,
FT-IR study of the nature and reactivity of surface NOx compounds formed after NO adsorption and NO + O2 coadsorption on zirconia- and sulfated zirconia-supported cobalt
Journal of Molecular Catalysis A: Chemical 193 (2003) 139–149.
3. **H. Kolev**, G. Rangelov, J. Braun, and M. Donath,
Reduced surface magnetization of NiMnSb(001),
Phys. Rev. B 72, (2005) 104415.
4. Paneva,D., Mitova,D., Manova,E., **Kolev,H.**, Kunev,B. and Mitov,I.,
Study of initial stage of mechanochemical transformation in pyrite,
Proceedings of the scientific-technical conference Bultrib 2006, 27 October 2006, Edited by Assoc. Prof. E. Assenova, Society of Bulgarian tribologists, Published by Tempto, Sofia, 2006, p.54-59, по-обширна статия е публикувана в:
Journal of Mining and Metallurgy, Section B: Metallurgy **43** (1) (2007) 57-70.
5. Eickhoff C, **Kolev H**, Donath M, Rangelov G, Chi LF.,
Nanostructuring of NiMnSb(110): Influence on surface magnetic properties.
Physical Review B - Condensed Matter and Materials Physics **76**(20) (2007) 205440.
6. Koleva, D.A., De Wit, J.H.W., Van Breugel, K., Bachvarov, V., **Kolev, H.**, Fraaij, A.,
Electrochemical measurements in cement extract solutions on reinforcing steel, previously conditioned in concrete,
ECS Transactions, **3** (13), (2007) 37-49.
7. L. Petrov, Y. Alhamed, G. Tiuliev, A. Arafat, **H. Kolev**, A. Al Zahrani,
Influence of support composition on activity of gold supported catalysts in CO oxidation,
Tenth International Symposium on Heterogeneous Catalysis, From : 23/8/2008 AD - To : 27/8/2008, King Abdulaziz University, Saudi Arabia, Article In Conference.
8. **H. Kolev**, Z. Cherkezova-Zheleva, J. Krstić, D. Dimitrov, D. Paneva, K. Ivanov, I. Mitov,
Characterisation of double oxide system Cu–Cr–O supported on γ-Al2O3,
"PHYSICAL CHEMISTRY 2008", Proc. of the 9th International Conference on Fundamental and Applied Aspects of Physical Chemistry, Published by the Society of Physical Chemistry of Serbia, (Ed. A. Antic-Jovanovich), "Jovan" Printing and Published Comp., ISBN 978-86-82475-16-3, vol. I, C-6-P, 151-153 (2008).
9. Z. Cherkezova-Zheleva, D. Dimitrov, D. Paneva, K. Ivanov, **H. Kolev**, I. Mitov,
Study on the deactivation reasons of Fe-Mo industrial catalysts for partial oxidation of methanol to formaldehyde,
"PHYSICAL CHEMISTRY 2008", Proc. of the 9th International Conference on Fundamental and Applied Aspects of Physical Chemistry, Published by the Society of Physical Chemistry of Serbia, (Ed. A. Antic-Jovanovich), "Jovan" Printing and Published Comp., ISBN 978-86-82475-16-3, vol. I, C-1-P, pp. 136-138 (2008).
10. St. Christoskova, Al. Eliyas, M. Stoyanova, D. Paneva, **H. Kolev**, L. Prahov, I. Mitov, L. Petrov,
Synthesis and activity of oxide catalytic systems for photo-oxidation of organics in aqueous medium. I. Photooxidaion of chlorphenol,
Nanoscience & Nanotechnology, Issue **8**, Eds. E. Balabanova, I. Dragieva, Prof. M. Drinov Acad. Publ. House, Sofia, 68-71 (2008).
11. Al. Eliyas, St. Christoskova, M. Stoyanova, D. Paneva, **H. Kolev**, L. Prahov, I. Mitov, L. Petrov,
Synthesis and activity of oxide catalytic systems for photo-oxidation of organics in aqueous medium II. Photooxidaion of Acid Black 194,
Nanoscience & Nanotechnology, Issue **8**, Eds. E. Balabanova, I. Dragieva, Prof. M. Drinov Acad. Publ. House, Sofia, 72-75 (2008).
12. Cherkezova-Zheleva, Z., **Kolev, H.**, Krstić, J., Dimitrov, D., Ivanov, K., Loncarević, D., Jovanović, D., Mitov, I.,
Characterization of double oxide system Cu-Cr-O supported on γ-Al2O3,
Russian Journal of Physical Chemistry A, **83** (9), (2009) 1436-1441.
13. **H. Kolev** and G. Tyuliev,
Quantitative XPS applied to nanostructures study,
Nanoscience & Nanotechnology, **9** eds. E. Balabanova, I. Dragieva, Sofia, (2009) 84.
14. Todorova, S., **Kolev, H.**, Holgado, J.P., Kadinov, G., Bonev, Ch., Pereñíguez, R., Caballero, A.,
Complete n-hexane oxidation over supported Mn-Co catalysts,
Applied Catalysis B: Environmental, **94** (1-2), (2010) 46-54.
15. Zaharieva, K., Vissokov, G., Paneva, D., **Kolev, H.**, Mitov, I.,
Physicochemical investigations of nanosized Al2O3, SiO2 and ZrO2-Y2O3 synthesised by plasma-chemical method,
Oxidation Communications, **33** (1), (2010) 156-166.
16. Paneva, D., Dimitrov, M., Velinov, N., **Kolev, H.**, Kozhukharov, V., Tsoncheva, T., Mitov, I.,
Mössbauer study of iron-based perovskite-type materials as potential catalysts for ethyl acetate oxidation,
Journal of Physics: Conference Series, **217** (1), (2010) 012043.
17. Hu, J., Koleva, D.A., De Wit, J.H.W., **Kolev, H.**, Van Breugel, K.,
Corrosion performance of carbon steel in simulated pore solution in the presence of micelles,
Journal of the Electrochemical Society, **158** (3), (2011) C76-C87.
18. Todorova, S., Naydenov, A., **Kolev, H.**, Tenchev, K., Ivanov, G., Kadinov, G.,
Effect of Co and Ce on silica supported manganese catalysts in the reactions of complete oxidation of n-hexane and ethyl acetate,
Journal of Materials Science, **46** (22), (2011) 7152-7159.
19. Бижев Ю., Ст. Георгиев, **Х. Колев**, Ст. Тодоров,
Регистриране и разпознаване на източници на нискочестотни механични трептения от сигнали на пиезоелектрически сензори,
Регистрация и выявление источников низкой частоте от сигналов пьезоэлектрических датчиков,
Registration and identification of sources of low frequency signals of piezoelectric sensors,
XXVI Международна конференция "Дефектоскопия'11",
Научни известия на НТСМ, юни 2011г. Scientific Proceedings, **1** (121) (2011) 122-125.

20. Георгиев Ст., Ю. Бижев, Ст. Тодоров, **Х. Колев**,
Разпознаване и класифициране на ритмика в сигнали получени от пиезоелектрически сензори,
XXVI Международна конференция "Дефектоскопия'11",
Научни известия на НТСМ, юни 2011г., Scientific Proceedings, **1** (121) (2011) 126-129.
21. S. Todorov, St, Georgiev, **H. Kolev**, Y. Bijev, E. Lalev, I. Atanasov,
Mathematical processing of signals obtained from piezoelectric sensors,
Journal of Materials Science and Technology, **19** (3) (2011) 20–31.
22. **H. Kolev**, S. Todorova, R. Ene, M. Shopska, V. Parvulescu and G. Kadinov,
Platinum states in the mesoporous Pt-Ti-SBA-15,
Nanoscience & Nanotechnology, **12** (2012) 131-134.
23. **Колев Х.,** Георгиев Ст., Ю. Бижев, Ст. Тодоров,
Оптимизация на честотния анализ и управление на сегментен доплеров модул чрез едночипов микроконтролер с ниска консумация.
Frequency analysis optimization and operation of segmental Doppler module by single-chip microcontroller with ultra-low power consumption
XXVII Международна конференция "Дефектоскопия'12",
"NDT days 2012"/"Дни на безразрушителния контрол 2012"
Научни известия на НТСМ, юни 2012г., Scientific Proceedings, **1** (133) (2012) 219-223.
24. Todorova, S., Naydenov, A., **Kolev, H.**, Holgado, J.P., Ivanov, G., Kadinov, G., Caballero, A.,
Mechanism of complete n-hexane oxidation on silica supported cobalt and manganese catalysts,
Applied Catalysis A: General, **413-414**, (2012) 43-51.
25. В. Петков, Н. Гидикова, Р. Вълов, С. Вълканов, **Х. Колев**,
Влияние на нанодиамантните частици върху структурообразуването на електрохимично хромирах слой,
Second National Conference with international participation Metal science, novel materials, hydro- and aerodynamics '2012, Institute for Metal Science, Equipment and Technologies "Acad. A. Balevski" with Hydro- and Aerodynamics Centre – BAS, 31 May – 1 June 2012, Bulgaria, PROCEEDINGS ISSN 1313-8308 paper 1.18, 47-53.
26. **H. Kolev**, S. Todorova, A. Naydenov, R. Ene, G. Ivanov, V. Parvulescu and G. Kadinov,
Catalytic activity of mesoporous SBA-15 modified with Pt and Ti in a deep methane, n-hexane and CO oxidation,
8th Annual International Symposium on Environment, Athens, Greece, 13-16 May 2013. ATINER CONFERENCE PAPER SERIES No: ENV2013-0413. (2013).
27. **H. Kolev**, K. L. Kostov, G. Tyuliev and Chr. Christov,
Experimental and theoretical study of minerals precipitation on the sea salt surface during seawater evaporation at relative humidity less than 34%
14th International workshop on Nanoscience and Nanotechnology with International Participation, NANO'2012, November 22 & 23, 2012, TECHNICAL UNIVERSITY – SOFIA., Article In Conference. In press
Nanoscience & Nanotechnology, **14** (2013)
28. **H. Kolev**, K. L. Kostov, G. Tyuliev and Chr. Christov,
Experimental and theoretical study of the surface chemical composition of sea salt crystallized at evaporation of seawater under natural conditions
National Crystallographic Symposium with International Participation, NCS2012, University of Chemical Technology and Metallurgy, Sofia, November 1–3, 2012, Article In Conference. In press. Submitted in Bul. Chem. Comm., **45 (**4) (2013), 584-591.
29. Ю. Бижев, С. Георгиев, **Х. Колев**, С. Тодоров,
Мултисензорно устройство за наблюдение на параметрите в околната среда,
Multi-Sensory device for environmental parameter detection,
XXVIII Международна конференция "Дефектоскопия'13",
"NDT days 2013"/"Дни на безразрушителния контрол 2013"
Научни известия на НТСМ, юни 2012г., Scientific Proceedings, **2** (139) (2013), 343-347.
30. Tanya Tsoncheva, Isabela Genova, Bojko Tsintsarski, Momtchil Dimitrov, Daniela Paneva, Zara Zheleva, Ivanka Yordanova, Gloria Issa, Daniela Kovacheva, Temenujka Budinova, **Hristo Kolev**, Radostina Ivanova, Ivan Mitov, Narcislav Petrov,
Transition metal modified activated carbons from biomass and coal treatment products as catalysts for methanol decomposition,
Reac Kinet Mech Cat, 2013, DOI 10.1007/s11144-013-0612-z
31. С. Георгиев, **Х. Колев,** Н. Обрешков, Е. Лалев
Система за сигурност в домовете на бъдещето,
Сборник материали с резултатите от изпълнението на задачите по проект HOME/2010/CIPS/AG/019, втора част, юни 2013, ISBN 978-954-92552-7-0.
32. D.A. Koleva, J. Hu, **H. Kolev**, K. van Breugel,
Self-healing phenomena on corroding steel in simulated pore water and mortar, substantiated via cyclic voltammetry and surface analysis,
J. of Intern. Sci. Publications: Materials, Methods & Technologies, part I, v.**7**, (2013) 124-136, ISSN: 1313-2539.
33. D.A. Koleva, J. Hu**, H. Kolev**, K. Van Breugel,
Self-healing of steel corrosion in model alkaline medium: electrochemical response and surface analysis,
6th International Conference on Computational Methods and Experiments in Materials Characterisation, MATERIALS CHARACTERISATION 2013, 4 – 6 June 2013, Siena, Italy.
Published: MATERIALS CHARACTERISATION VI, Wit Transaction on Engineering Science, **77**, 2013, 205-216, ISBN: 978-1-84654-720-9, eISBN: 978-1-84654-721-6, ISSN(print) : 1746-471, ISSN (online) : 1743-3533.

Projects

HOME/2010/CIPS/AG/019, Program: The Prevention, Preparedness and Consequence Management of Terrorism and other Security-related Risks (CIPS). Theme: „Development of tools needed to coordinate inter-sectoral power and transport cip activities at a situation of multilateral terrorist threat. Increase of the capacity of key cip objects in Bulgaria", 2010 – 2013.