

Short Curriculum Vitae of Prof. Dr. Konstantin M. Neyman

Personal Details

Citizenship: German
Language skills: English, German, Spanish, Catalan, Russian
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Education

1973-1978 Study of chemistry, Novosibirsk State University, USSR
1978 MSc in Inorganic Chemistry, Novosibirsk State University
1978-1980 Research trainee, Institute of Inorganic Chemistry, USSR Academy of Sciences, Krasnoyarsk
1986 PhD in Chemistry, Institute of Inorganic Chemistry, USSR Academy of Sciences, Novosibirsk

Employment History

1980-1989 Junior Scientist / Scientist, Institute of Chemistry and Chemical Technology, USSR Academy of Sciences, Krasnoyarsk
1989-1992 Senior Scientist, Head of the Quantum Chemistry Group, Institute of Chemistry of Natural Organic Materials, Russian Academy of Sciences, Krasnoyarsk
1993-1998 Research Associate, Institute of Physical and Theoretical Chemistry, Technische Universität München, Munich, Germany
1998-2002 Research Associate, Department of Chemistry, Institute of Physical Chemistry, Ludwig-Maximilians-Universität München, Munich, Germany
2002-2003 Research Associate, Dept. of Chemical Physics, Fritz-Haber Inst. of the MPG, Berlin, Germany
2003-now ICREA* Professor, Dept. de Ciència dels Materials i Quím. Física & Inst. de Quím. Teòr. i Comp., Universitat de Barcelona; *Reactivity of Nanostructures* group leader. Promoted in 2007, 2012, 2017

Other Professional Activities (selection)

1982 Visiting Scientist (2 months), Zelinsky Inst. of Organic Chem., USSR Acad. of Sci., Moscow, USSR
1985-1991 Senior Lecturer, Assistant Professor at the Chair of Inorganic Chemistry, Krasnoyarsk State Uni.
1991-1992 Alexander von Humboldt research fellowship (with Prof. N. Rösch), TU München, Germany
2003 Habilitation and Venia Legendi in Theoretical Chemistry at TU München, Germany
2009 Invited Visiting Professor, Universidad Nacional del Sur, Bahía Blanca, Argentina
2009 Research Visit (1 month), Uni. Erlangen-Nürnberg, Germany (Profs. A. Görling, J. Libuda)
2010 Accreditation in Advanced Research, Catalan University Quality Assurance Agency, Spain
2010-2014 COST Action MP0903 "Nanoalloys", Leader of the Workgroup "Catalysis"
2013 Invited Visiting Professor (1.5 month), SCBE, Nanyang Technological University, Singapore
2011-2016 Invited Visiting Scientist, Universität Erlangen-Nürnberg, Germany (Profs. J. Libuda, A. Görling)
2017 Invited Visiting Professor, Uppsala University, Ångström Laboratory, Uppsala, Sweden
2017 Chalmers Jubilee Professor, Chalmers University of Technology, Gothenburg, Sweden

Awards, Research Fellowships, Supervision of Students, etc.

1979 First prize for Diploma Thesis, Russian competition of students' research works in 1978/79
Since 1982 Supervisor of Diploma/MSc studies: Krasnoyarsk - P.V. Avramov (1982), O.G. Senotrusov (1986); Barcelona - A. Bruix (2009), J. Toda (2011)
Since 1985 Supervisor of PhD studies: V.A. Nasluzov (1985-1989); Barcelona - A. Bruix (2009-17.2.2014, *cum laude*), S.M. Kozlov (2011-16.1.2015, *cum laude*), A. Figueroba (2013-14.7.2017, *excellent*)
1991-1992 Research fellowship of the Alexander von Humboldt Foundation, Germany
1991 Senior Scientist in Physical Chemistry (awarded by the USSR Supreme Attestation Committee)
1992 Docent, Chair of Inorganic Chemistry (awarded by the USSR State Committee)
Since 2000 Advisor of PhD students: TU München - D.I. Ganyushin (2004); C. Inntam (2005); K.H. Lim (2006), A.B. Mohammad (2008); Uni. Barcelona - S. González (2007), F. Viñes (2008)
Since 2006 Academic host of: Dr. C. Loschen (A. v. Humboldt grant; 2006-2007), Dr. I. Yudanov (PIV; 2008), Prof. G. Vayssilov (HPC-Europa; 2009-2010), Dr. H. Aleksandrov (EXTESP 2011-12; 2013-16)
Since 2005 Conference attendance awards of the A. von Humboldt Foundation (2005, 2006, 2010, 2015)
2012 Visiting grant award of the A. von Humboldt Foundation for a research stay in the Universität Erlangen-Nürnberg (Germany, July-August 2012)
2016 Visiting Professor award, Uppsala University, Uppsala, Sweden
2016 Chalmers Jubilee Professor Award, Chalmers University of Technology, Gothenburg, Sweden

* ICREA - Catalan Institute for Research and Advanced Studies; since 16/11/2003

Attraction of Funds, selection since 2009

- 2009 Recognized research group grant 2009SGR-1041, PI F. Illas, Generalitat de Catalunya, Spain 2009-2013
- 2009 Co-initiator of the European Network COST MP0903 “Nanoalloys”. 2010-2014
- 2010 Secured FPU PhD grant for S. Kozlov, Ref. AP2009-3379, MEDU Spain. 12/2010-10/2014
- 2010 CECAM grant to organize Workshop “Understanding structure and functions of reducible oxide systems”, Zaragoza, Spain, 2011 with co-funding by Facultat de Química, Universitat Barcelona
- 2011 Grant to organize Joint Meeting of COST Action MP0903 “Nanoalloys” 04/2011, Barcelona, Spain
- 2011 Co-initiator of the European Network COST CM1104 “Reducible oxides”. 2012-2016
- 2011 Secured post-doctoral grant SB2010-0172 for Dr. H. Aleksandrov, MEDU, Spain. 07/2011-12/2012
- 2012 Grant FP7-NMP.2012.1.1-1 ChipCAT “Design of thin-film nanocatalysts for on-chip fuel cell technology”, reference 310191, EU. 12/2012-11/2016 (PI)
- 2012 “Theoretical modelling of the reactivity of nanostructures relevant to catalysis and to energy technologies”, grant CTQ2012-34969 Spanish Subprograma de Proyectos de Investigación Fundamental 01/2013-12/2015 (PI)
- 2014 2 grants to organize a General Meeting of the COST Action CM1104, 11/2014, Barcelona, Spain
- 2014 Recognized research group grant 2014 SGR 97, PI F. Illas, Generalitat de Catalunya, Spain 2014-2016
- 2016 “Comprensión, control y optimización en catálisis heterogénea y fotocatalisis en la nanoescala. Aplicación a la conversión de dióxido de carbono y a la producción de hidrogeno”, grant CTQ2015-64618-R Spanish MINECO/FEDER, 01/2016-12/2018 (PIs F. Illas & S.T. Bromley)
- 2016 Horizon-2020 grant MATERIALS NETWORKING “Enhancing the scientific capacity of the Faculty of Chemistry and Pharmacy at Sofia University as leading regional research and innovation centre in the area of advanced functional materials”, EU, reference N° 692146; 09/2016-08/2019 (PI)
- 2017 Mobility grant, Programa Salvador de Madariaga 2017, PRX17/00348, Ministerio de Educación, Cultura y Deporte, Spain, 01-06/2018 (applicant/PI)

Selected Managerial Activities

Spanish representative in the Management Committee of the COST Actions: CM0904 “Intermetallic compounds as catalysts” (2010-2014), MP0903 “Nanoalloys as advanced materials” (2010-2014; leader of the Working Group “Catalysis”) and CM1104 “Reducible oxide chemistry, structure and functions” (2012-2016)

Organization of Conferences, selection since 2011

Co-organizer, Symposium “Nano-alloys: Theory, Synthesis & Characterization”, 27th Intern. Materials Research Congress, Cancún, Mexico, 2018; Member of the International Scientific Committee, 3rd Intern. Conference “Fundamentals and applications of cerium dioxide in catalysis”, Barcelona, Spain, 2018; Member of the Scientific Committee, 5th Intern. School-Conference for Young Scientists “Catalyst Design: From Molecular to Industrial Level”, Moscow, Russia, 2018; Member of the Scientific Committee, X Intern. Conference on Mechanisms of Catalytic Reactions / Discussion Leader of the Symposium “Quantum-mechanical modelling of catalytic processes”, Svetlogorsk, Russia, 2016; Organizer/co-chairman of the Symposium “DFT calculations in catalytic studies”, XII European Congress on Catalysis, Kazan, Russia, 2015; Co-organizer of the Symposium “Frontiers in surface and materials science: theory and practice”, Barcelona, Spain, 2014; Chairman /organizer of the 3rd Meeting of the COST Action CM1104 on Reducible oxides, Barcelona, Spain, 2014; Organizer of the Symposium “Clusters, nanoparticles and nanostructures in catalysis”, Barcelona, Spain, 2014; 2nd Intern. Symposium on Intermetallic Compounds in Methanol Steam Reforming, Munich, Germany, 2012; CECAM Workshop “Understanding ceria based materials in catalysis”, Zaragoza, Spain, 2011

Editorial Activities

Editorial board member of journals: *Advances in Physical Chemistry*, 2009-2017; *Journal of Siberian Federal University: Chemistry*, 2013 - , *Journal of Multiscale Modeling*, 2017 - .

Research Focuses

Innovative first-principles modelling of the structure and reactivity of metal (Pd, Pt, nanoalloys), metal-oxide (e.g. CeO₂) nanoparticles and composite nano-materials for catalysis and sustainable energy technologies.

Publications and Conference Presentations (summary)

One book, 10 reviews, >180 research articles in refereed journals, 115 invited talks and >200 contributed presentations at conferences and seminars. *H-index* = 47 (since 1991), ca. 6500 Web of Science citations. 23 papers in such premier journals as *ACS Nano*, *Angew. Chemie* (4), *Chem. Commun.* (2), *Chem. - Eur. J.* (3), *Chemical Science*, *Chem. Soc. Rev.*, *J. Am. Chem. Soc.* (4), *J. Mater. Chem.* (3), *Nanoscale* (2), *Nature Materials* (2)

October 3, 2017