

CURRICULUM VITAE

Full Name: Svetoslav Emilov Anachkov

Date and place of birth: 25th October 1986, Kyustendil, Bulgaria

Gender: Male

Marital status: Single

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LANGUAGES

English C2 Level (Professional working proficiency)

Bulgarian Native

ACADEMIC DEGREES

2014 Ph.D. in Physical/Theoretical Chemistry, Sofia University, Bulgaria

2011 M.Sc. in Colloid Chemistry (*summa cum laude*), Sofia University, Bulgaria

2009 B.Sc. in Chemistry (*summa cum laude*), Sofia University, Bulgaria

ACADEMIC APPOINTMENTS / VISITS

23 Mar 2016 – Visiting Researcher (Host: Dr. Eddie Pelan), Unilever R&D, Vlaardingen,
27 Mar 2016 Netherlands

1 Mar 2015 – Postdoctoral Fellow (Supervisor: Prof. Lucio Isa), Swiss Federal Institute
31 Aug 2015 of Technology, ETHZ, Zurich, Switzerland

23 Feb 2015 – Assistant Professor, Department of Chemical and Pharmaceutical
Engineering, Sofia University, Sofia, Bulgaria

3 Nov 2014 – Visiting Researcher (Host: Dr. Kaloian Koynov), Max Planck Institute for
14 Nov 2014 Polymer Research, Mainz, Germany

- 14 Jan 2014 – Visiting Researcher (Host: Prof. Dganit Danino), Technion – Israel
3 Feb 2014 Institute of Technology, Haifa, Israel
- 25 Feb 2013 – Visiting Researcher (Host: Dr. Massimo Noro), Unilever R&D, Port
1 Mar 2013 Sunlight, UK
- 1 July 2010 – Research Associate, Department of Chemical and Pharmaceutical
23 Feb 2015 Engineering, Sofia University, Sofia, Bulgaria

RESEARCH INTERESTS

Surface Forces in Colloidal Dispersions; Micellization and Self-Assembly; Rheology; Nanoparticle Synthesis and Ordering; Particle Wetting; Computer Modeling

TEACHING EXPERIENCE

- 2007 – Seminars, Linear Algebra and Analytical Geometry, undergraduate
2010 – Seminars, Calculus, undergraduate
2011 – Exercises, Transport Phenomena, undergraduate
2011 – Seminars and Exercises, Continuum Mechanics and Rheology, undergraduate
2012 – Seminars and Exercises, Applied Thermodynamics, undergraduate
2012 – Lectures and Exercises, Nanocolloids / Colloidal Crystals, graduate
2015 – Lectures, Optical and Electrokinetic Properties of Colloids, graduate

HONOURS

- 2015 SCIEX Fellowship, Title: “*Particle self-assembly at anisotropic fluid interfaces*”
2008 Annual award after Rostislav Kaishev for Achievements in Chemistry, Evrika Foundation
2008 Award for the Best Scholarly Essay (Title: “*Molecular Machines*”), Department of General and Inorganic Chemistry, Sofia University
2007 Certificate for the Best Synthesis in the Laboratory of Nanoparticle Science and Technology, Department of General and Inorganic Chemistry, Sofia University
2007 Award of the Rector of Sofia University for Excellence in Chemistry
2007 Certificate for the Oxford University Press Achievement in Chemistry Prize
2006 Award for the Best Course Work in Inorganic Chemistry (Title: “*Adsorption of CO on Cu (111). Quantum Mechanical Calculations*”), Department of General and Inorganic Chemistry, Sofia University

- 2006 Award from the President of Bulgaria for Extraordinary Achievements in the National and International Olympiads
- 2005 – 2011 Scholarship of Evrika Foundation for Excellence in Chemistry
- 2005 Silver Medal awarded from the 37th International Chemistry Olympiad, Taipei, Taiwan
- 2005 National Diploma for Excellence in High School and for the Gold Medal awarded from the 3rd Balkan Chemistry Olympiad
- 2005 Gold Medal awarded from the 3rd Balkan Chemistry Olympiad, Bucharest, Romania
- 2005 Certificate for Laureate in the National Olympiad in Chemistry
- 2004 Certificate for Participation in the 36th International Chemistry Olympiad, Kiel, Germany

PARTICIPATION IN RESEARCH AND INDUSTRIAL PROJECTS

Research Projects – Funding Institutions

Bulgarian National Science Fund

Ministry of Education and Science, Bulgaria

SCIEX - Scientific Exchange Programme NMS.CH, Switzerland

Industrial Projects – Funding Institutions

Unilever R&D, Trumbull, Connecticut, USA

Unilever R&D, Port Sunlight, UK

Unilever R&D, Vlaardingen, Netherlands

Unilever R&D, Bangalore, India

Unilever R&D, Shanghai, China

PUBLICATIONS

Theses

2011 M.Sc. thesis, *Determination of the Aggregation Number and Charge of Ionic Surfactant Micelles from the Stepwise Thinning of Foam Films*, Sofia University.

2014 Ph.D. thesis, *Effect of ionic micelles on liquid film stratification and disc-like micelles growth*, Sofia University

Published papers

1. S. Anachkov, P. Vasileva, C. Dushkin. Preparation of Two-dimensional Direct Opals by Controlled Assembly of Silica Spheres. *J. Optoelectronics and Advanced Materials* **11** (2009) 1355-1358.
2. S.E. Anachkov, K.D. Danov, E.S. Basheva, P.A. Kralchevsky, K.P. Ananthapadmanabhan. Determination of the Aggregation Number and Charge of Ionic Surfactant Micelles from the Stepwise Thinning of Foam Films. *Adv. Colloid Interface Sci.* **183-184** (2012) 55-67.
3. P.A. Kralchevsky, K.D. Danov, S.E. Anachkov, G.S. Georgieva, K.P. Ananthapadmanabhan. Extension of the Ladder Model of Self-assembly from Cylindrical to Dislike Surfactant Micelles. *Curr. Opin. Colloid Interface Sci.* **18** (2013) 524-531.
4. S.E. Anachkov, P.A. Kralchevsky, K.D. Danov, G.S. Georgieva, K.P. Ananthapadmanabhan. Dislike vs. Cylindrical Micelles: Generalized Model of Micelle Growth and Data Interpretation. *J. Colloid Interface Sci.* **416** (2014) 258-273.
5. P.A. Kralchevsky, K.D. Danov, S.E. Anachkov. Micellar Solutions of Ionic Surfactants and Their Mixtures with Nonionic Surfactants: Theoretical Modeling vs. Experiment. *Colloid J.* **76** (2014) 255-270.
6. S.E. Anachkov, S. Tcholakova, D.T. Dimitrova, N.D. Denkov, N. Subrahmaniam, P. Bhunia. Adsorption of Linear Alkyl Benzene Sulfonates on Oil–Water Interface: Effects of Na^+ , Mg^{2+} and Ca^{2+} Ions. *Colloids and Surfaces A: Physicochem. Eng. Aspects* **466** (2015) 18–27.
7. P.A. Kralchevsky, K.D. Danov, S.E. Anachkov. Depletion Forces in Thin Liquid Films Due to Nonionic and Ionic Surfactant Micelles. *Curr. Opin. Colloid Interface Sci.*, **20** (2015) 11–18.
8. S.E. Anachkov, I. Lesov, M. Zanini, P.A. Kralchevsky, N.D. Denkov, L. Isa. Particle Detachment from Fluid Interfaces: Theory vs. Experiments. *Soft Matter* **12** (2016) 7632–7643.
9. G.S. Georgieva, S.E. Anachkov, I. Lieberwirth, K. Koynov, P.A. Kralchevsky. Synergistic Growth of Giant Wormlike Micelles in Ternary Mixed Surfactant Solutions: Effect of Octanoic Acid. *Langmuir* **32** (2016) 12885–12893.
10. M. Zanini, C. Marschelke, S. Anachkov, E. Marini, A. Synytska, L. Isa. Universal emulsion stabilization from the arrested adsorption of rough particles at liquid-liquid interfaces. *Nature Communications*, accepted.

CONFERENCES AND INVITED SEMINARS/LECTURES

Oral talks

1. S.E. Anachkov, K.D. Danov, E.S. Basheva, P.A. Kralchevsky. Determination of the aggregation number and charge of ionic surfactant micelles from the stepwise thinning of foam films. 11th National Student's Chemistry Conference, Sofia, Bulgaria, 14 – 16 May 2012.
2. S.E. Anachkov, K.D. Danov, E.S. Basheva, P.A. Kralchevsky, K.P. Ananthapadmanabhan. Determining the charge and aggregation number of ionic surfactant micelles from the stepwise thinning of foam films. 26th Conference of the European Colloid and Interface Society (ECIS), Malmo & Lund, Sweden, 2 – 7 September 2012.
3. S.E. Anachkov, P.A. Kralchevsky, K.D. Danov, E.S. Basheva, G.S. Georgieva. Micelle-monomer equilibria: Ionic micelles and giant mixed micelles. *Invited seminar*, Electron Microscopy Group, Technion-IIT, Haifa, Israel, 27 January 2014.
4. S.E. Anachkov, P.A. Kralchevsky, K.D. Danov, G.S. Georgieva, K.P. Ananthapadmanabhan. Shape and size determination of giant mixed micelles. 12th European Summer School on Scattering Methods Applied to Soft Condensed Matter, Bombannes, France, 16 – 23 May 2014.
5. S.E. Anachkov, P.A. Kralchevsky, K.D. Danov, G.S. Georgieva, K.P. Ananthapadmanabhan. Dislike vs. cylindrical micelles: generalized model of micelle growth and data interpretation. 20th International Symposium on Surfactants in Solution (SIS), Coimbra, Portugal, 22 – 27 June 2014.
6. S.E. Anachkov, G.S. Georgieva, P.A. Kralchevsky, P. Shestakova, D. Danino, K.P. Ananthapadmanabhan. Giant micelles in ternary surfactant solutions with applications in personal-care products: NMR and microscopy study. 2nd International Conference “Advanced Functional Materials”, Nessebar, Bulgaria, 3 – 6 September 2014.
7. S.E. Anachkov, I.I. Lesov, L. Isa, P.A. Kralchevsky. Particle detachment from fluid-fluid interfaces: Theory vs. experiment. ISA/LSST offside group meeting, Damulds, Austria, 19 – 21 August 2015.
8. S.E. Anachkov, I.I. Lesov, L. Isa, P.A. Kralchevsky, N.D. Denkov. Particle detachment from fluid-fluid interfaces: Data interpretation and analytical modelling. SGI-Fund Symposium, Sofia, Bulgaria, 29 – 31 October 2015.
9. S.E. Anachkov, G.S. Georgieva, P.A. Kralchevsky, D. Danino, L. Abezgauz, I. Lieberwirth, K. Koynov. Growth of giant wormlike, dislike and branched micelles in

ternary mixed surfactant solutions: Rheology vs. cryo-TEM imaging. *Invited lecture*, Shampoo Symposium, Port Sunlight, UK, 29 – 30 September 2016.

Posters

1. S. Anachkov, P. Vasileva, C. Dushkin. Controlled assembly of silica spheres into ordered two-dimensional mono- and multilayers. Nanoscale Phenomena in Colloid and Interface Science (NPCIS), Plovdiv, Bulgaria, 20 – 22 September 2007.
2. S. Anachkov, P. Vasileva, C. Dushkin. Preparation of two-dimensional direct opals by controlled assembly of silica spheres. International School on Condensed Matter Physics (ISCMP), Varna, Bulgaria, 31 August – 5 September 2008.
3. S.E. Anachkov, P.A. Kralchevsky, G.S. Georgieva, K.D. Danov, K.P. Ananthapadmanabhan. Growth of giant disclike micelles in ternary mixed surfactant solutions: Theoretical model vs. experimental data. 27th Conference of the European Colloid and Interface Society (ECIS), Sofia, Bulgaria, 1 – 6 September 2013.
4. S.E. Anachkov, P.A. Kralchevsky, G.S. Georgieva, K.D. Danov, K.P. Ananthapadmanabhan. Growth of giant disclike micelles in ternary mixed surfactant solutions: Theoretical model vs. experimental data. 3rd International Soft Matter Conference (ISMC), Rome, Italy, 15 – 19 September 2013.
5. S.E. Anachkov, G.S. Georgieva, P.A. Kralchevsky, D. Danino, L. Abezgauz, I. Lieberwirth, K.D. Danov, K. Koynov. Resonance micellar growth in mixed surfactant solutions: Rheology and cryo-TEM imaging. 4th International Soft Matter Conference (ISMC), Grenoble, France, 12 – 16 September 2016.
6. S.E. Anachkov, I. Lesov, M. Zanini, P.A. Kralchevsky, L. Isa. Particle detachment from fluid-fluid interfaces: Theory vs. experiments. 4th International Soft Matter Conference (ISMC), Grenoble, France, 12 – 16 September 2016.

Participation in the Organization of International Schools and Conferences

- 2010 EUFOAM International Conference, Borovets, Bulgaria, 14 – 16 July 2010.
- 2011 Training School “Fluids and Solid Interfaces”, ESF COST Action D43 *Colloid and Interface Chemistry for Nanotechnology*, Sofia, Bulgaria, 12 – 15 April 2011.
- 2012 Workshop “Discussion on Hydration Forces”, ESF COST Action CM1101 *Colloidal Aspects of Nanoscience for Innovative Processes and Materials*, Sofia, Bulgaria, 1 – 4 April 2012.