

Yan Zeng

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Education

Technische Universitaet Berlin, November 2011

Ph.D., *magna cum laude*, Physical Chemistry
Advisor: Prof. Dr. Regine von Klitzing

Humboldt Universitaet zu Berlin, October 2006

M.S., *very good*, Polymer Science

Wuhan University, June 2004

B.S., Applied Chemistry

Research and teaching experience

North Carolina State University, 2012-Present

Postdoctoral research with Prof. Orlin Velev
Topic: Microfibrillated cellulose based materials and composites

Technische Universitaet Berlin, 2006-2011

Graduate Student with Prof. Dr. Regine von Klitzing
Ph.D. Thesis: Structuring of Colloidal Dispersions in Slit-pore Confinement

Technische Universitaet Berlin, 2005-2006

Research Assistant with Prof. Dr. Gerhard Findenegg
Master's Thesis: DSC Study of Melting and Freezing of Organic Substances in Ordered Mesoporous Silica Materials

Wuhan University, 2004

Research Assistant with Prof. Naicai Cai
Bachelor's Thesis: Chemical Deposition of Polyaniline on Activated Carbon for Electrochemical Capacitors

Technische Universitaet Berlin, Spring 2007/2008/2009

Teaching Assistant
Introductory to the experimental part of master's course "Polymers at interface"

Awards

Section Condensed Matter (SKM) Dissertation Award of DPG 2012

Scholarship for female Ph.D. student (Frauen-Promotionsabschlussstipendium), Technical University Berlin, 2010

Excellent undergraduate's thesis, Wuhan University, 06/2004

Outstanding undergraduate student scholarship, Wuhan University, 2001- 2003

Skills

Mesoporous materials synthesis, layer-by-layer deposition, surface modification, polymerization, self-assembly of colloidal particles

AFM, including surface imaging, force measurements, and mechanical properties determination; SAXS; DSC; QCM

Nitrogen adsorption, surface tension, zeta potential, contact angle, ellipsometry, IR, UV-Vis spectroscopy, cyclic voltammetry, X-ray diffraction, SEM, TEM

Software: Igor Pro, Latex, MS office, Origin

Language: English (fluent), German (basic), Chinese (native)

Selected Conference contributions

Invited talk "Structuring of colloidal dispersions in slit-pore confinement" at **76th DPG Spring Meeting of the Condensed Matter Section**, March 25th - 30th 2011, Berlin

Poster "Investigation of interaction across the thin liquid film of colloidal suspensions by CP-AFM" at **25th Meeting of European Colloid and Interface Society**, September 4th - 9th 2011, Berlin

Oral presentation "Structuring of colloidal suspensions in confined geometries" at **7th Liquid Matter**, June 27th - July 1st 2008, Lund, Sweden

Oral presentation "Structuring of colloidal suspensions confined in thin liquid films" at **72th DPG Spring Meeting of the Condensed Matter Section**, February 25th - 29th 2008, Berlin

Publications

Surviving Structure in Colloidal Suspensions Squeezed from 3D to 2D, Sabine H. L. Klapp, Yan Zeng, Dan Qu, and Regine von Klitzing, *Physical Review Letters*, **2008**, *100*, 118303

Asymptotic structure of charged colloids between two and three dimensions: the influence of salt, Sabine H. L. Klapp, Stefan Grandner, Yan Zeng, and Regine von Klitzing, *Journal of Physics: Condensed Matter*, **2008**, *20*, 494232

Impact of surface charges on the solvation forces in confined colloidal solutions, Stefan Grandner, Yan Zeng, Regine von Klitzing, and Sabine H. L. Klapp, *The Journal of Chemical Physics*, **2009**, *131*, 154702

Oscillatory Structural Forces Due to Nonionic Surfactant Micelles: Data by Colloidal-Probe AFM vs Theory, Nikolay C. Christov, Krassimir D. Danov, Yan Zeng, Peter A. Kralchevsky, and Regine von Klitzing, *Langmuir*, **2010**, *26*, 915-923

Charged silica suspensions as model materials for liquids in confined geometries, Sabine H. L. Klapp, Stefan Grandner, Yan Zeng, and Regine von Klitzing, *Soft matter*, **2010**, *6*, 2330-2336

Effect of particle size and Debye length on order parameters of colloidal silica suspensions under confinement, Yan Zeng, Stefan Grandner, Cristiano L.P. Oliveira, Andreas F. Thuenemann, Oskar Paris, Jan S. Pedersen, Sabine H. L. Klapp, and Regine von Klitzing, *Soft matter*, **2011**, *7*, 10899-10909

Structuring of colloidal suspensions confined between a silica microsphere and an air bubble, Yan Zeng, Regine von Klitzing, *SoftMatter*, **2011**, *7*, 5329-5338

Oscillatory Forces of Nanoparticle Suspensions Confined between Rough Surfaces Modified with Polyelectrolytes via the Layer-by-Layer Technique, Yan Zeng, Regine von Klitzing, *Langmuir*, **2012**, *28*, 6313-6321

Scaling of layer spacing of charged particles under slit-pore confinement: effect of concentration or of effective particle diameter?, Yan Zeng, Regine von Klitzing, *Journal of Physics: Condensed Matter*, **2012**, *24*, 464125