

# ANDREY V. SHIBAEV

## CURRICULUM VITAE

### CURRENT POSITION:

Senior research associate, Department of Physics  
Lomonosov Moscow State University

### DEGREE:

Ph.D in Condensed matter physics

### PERSONAL INFORMATION:

- Date of birth: February 26, 1988
- Place of birth: Moscow, Russia
- Nationality: Russian
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### EDUCATION:

- 2012 – 2019 (in summer): IFALPES school, Annecy, France (studying French language), graduated with all excellent marks
- 2010 – 2013: PhD student, Chair of Polymer and Crystal Physics, Physics Department, Moscow State University
- 2004 – 2010: Student, Physics Department, Moscow State University (MSc, graduated with honour)
- 2003 – 2004: Lecture courses on Mathematics and Physics at the Department of computational mathematics and cybernetics, Moscow State University
- 2002 – 2004: Gymnasium № 1534, Moscow (finished with silver medal)
- 1995 – 2002: English language school EF English First (finished with all excellent marks, level of English: advanced)
- 1994 – 2002: School № 18, Moscow

### WORK EXPERIENCE:

- 2019 – present: Senior research associate, Chair of Polymer and Crystal Physics, Physics Department, Moscow State University
- 2018 – 2019: Research associate, Chair of Polymer and Crystal Physics, Physics Department, Moscow State University

- 2017 – 2018: Junior research associate, Chair of Polymer and Crystal Physics, Physics Department, Moscow State University
- 2013 – 2017: Engineer, Chair of Polymer and Crystal Physics, Physics Department, Moscow State University
- 2010 – 2014: Specialist, Direction of the Russian Festival of Science, Moscow
- 2012 – 2013: Leading specialist, Department of Research Policy and Research Project Management, Moscow State University
- 2010 – 2012: Key specialist, Department of Research Policy and Research Project Management, Moscow State University
- 2009 – 2010: Specialist, Department of Research Policy and Research Project Management, Moscow State University
- 2009: Laboratory assistant, Chair of Polymer and Crystal Physics, Physics Department, Moscow State University

## SCIENTIFIC RESEARCH:

- General interests: polymers, colloidal systems, surfactants, self-assembly, fluids for oil recovery, polymer and supramolecular networks and gels, double networks, interaction of surfactants with polymers, responsive gels, synthesis of nanoparticles, nanocomposite polymer gels, microemulsions, interaction of polymers and nanomaterials with biological matter, liposomes.
- Type of research: experiment
- Expertise: rheometry, small-angle neutron scattering (SANS), small-angle X-Ray scattering (SAXS), cryo-transmission electron microscopy (cryo-TEM), transmission electron microscopy (TEM), dynamic and static light scattering (DLS, SLS), nuclear magnetic resonance (NMR), optical microscopy, fluorescent spectroscopy and microscopy, spectrophotometry
- Computer skills: programming in C++, Matlab, HTML; analysis of the rheological data using the programs IRIS Rheohub and Anton Paar Polymer Analysis Package; analysis of the scattering data using the programs Sasview, Sasfit, Atsas, Fitter, FISH, IGOR; analysis of the electron microscopy data using the program ImageJ.

## PROJECTS AND GRANTS:

### Leader of the following projects:

- 2018-2021: Russian Science Foundation (RSCF, grant № 18-73-10162) “Nanocomposite self-healing hydrogels based on double polymer networks”
- 2016: Project of the company “Innopraktika” within the grant contest “Development of new materials with unique properties” (grant № 016-03/13)
- 2016: Russian Foundation for Basic Research (grant № 16-33-80162 mol\_ev\_a), “Novel type of hydraulic fracturing fluids, which enhance the oil recovery efficiency in the absence of mixing and breakers”

- 2015 – 2017: Grant council of the President of the Russian Federation (stipend 4910.2015.4), “Interaction of inorganic particles with membranes of lipid vesicles”
- 2014 – 2016: Bortnik Fund (Fund for the development of SMEs in science and technology, grant № 0008633), “Development and investigation of novel responsive gels based on micellar and polymer chains for application in oil recovery”
- 2014 – 2015: Russian Foundation for Basic Research (grant № 14-03-32085 mol\_a), “Novel self-assembled networks based on micellar and polymer chains, which are highly responsive to hydrocarbons”
- 2013 - 2015: Scientific consulting for the research department of one of the largest world FMCG companies (details can be provided on demand)
- 2012: Russian Foundation for Basic Research (grant № 12-03-09404), “Rheology of mixed cylindrical surfactant micelles near the region of phase separation”
- 2009 – 2012: Several projects of the Russian Foundation for Basic Research for participation in conferences (12-03-09404, 11-03-16085, 11-03-09514, 10-03-09394, 09-03-09233)

## **SCIENTIFIC VISITS AND PROBATIONS ABROAD:**

- 07/2019: University of Naples, Italy. Participation in the DODYNET summer school "Transient and complex polymer networks"
- 07/2015: University of Naples, Italy. Participation in the SUPOLEN summer school "Dynamics of supramolecular polymers"
- 09/2013: University of Oxford, UK. Participation in the 13th Oxford school on neutron scattering
- 07/2011: University of Naples, Italy. Participation in the Dynacop summer school "Understanding polymer dynamics: state of the art and challenges"
- 09/2011: Katholieke Universiteit Leuven, Belgium. Participation in the 13th European School on Rheology
- 06/2011: Bombannes, France. Participation in the 13th European summer school on “Scattering methods applied to soft condensed matter”
- 05-06/2010: Research group of Prof. K. Edwards, Department of Physical and Analytical Chemistry, Uppsala University, Sweden. Topic: cryo-transmission electron microscopy of surfactant micelles with solubilized hydrocarbon

## **HONORS AND AWARDS:**

- 2019: Prize of the Soft Matter journal for the best poster presentation at the 13th Annual European Rheology Conference
- 2019: Winner of the Oleg Deripaska contest for young scientists of the Moscow State University

- 2018: Scholarship of the Moscow State University for young lecturers and researchers who achieved significant results in science and teaching
- 2017: Awardee of the Contest for young scientists of the Department of Physics, MSU
- 2017: Awardee of the Contest of scientific works performed by the researchers of Department of Physics, MSU (under 35 years)
- 2017: Winner of Contest of works which contribute to the implementation of the MSU Development program
- 2016: Diploma for the best presentation at the conference Lomonosov-2016 (Moscow, Russia)
- 2015-2017: Scholarship of the President of the Russian Federation for young scientists
- 2015: Winner of the scientific contest “Evrika! Idea” of the company “Innopraktika” and RFBR
- 2015: Awardee of the All-Russian contest of innovative projects “Intellect2All” of the program “Lift to the future” in the section “Oil and gas technologies”
- 2015: Member of the team - winner of the biological game during the Winter school “Modern biology and future biotechnologies”
- 2012: LG Chem Scholarship
- 2010-2016: Diplomas for the active participation in the organization of Moscow Science Festivals
- 2010: Scholarship of the Moscow Mayor
- 2009: Diploma for the best presentation at the conference Lomonosov-2009 (Moscow, Russia)
- 2009: Diploma for the best presentation at the conference VNKSF-15 (Tomsk, Russia)
- 2008, 2009: S.I. Vavilov Scholarship (MSU)
- 2015-present: Member of the European Society of Rheology
- 2014-present: Member of the American Chemical Society (ACS)

## TEACHING:

- 2018 – present: Lecture course "Neutron and X-Ray scattering for investigation of nanomaterials" for the 2nd year postgraduate students at the Faculty of Physics of the Lomonosov Moscow State University
- 2018 – present: Lecturer at the Russian-German traveling seminar “Nanomaterials and large-scale research centers” (<https://www.mesostructures.uni-bayreuth.de/en/travelling-seminar/index.html>)
- 2018 – present: Lecture course "Self-assembly as a route for creation of new molecular systems" for the 1st year postgraduate students at the Faculty of Physics of the Lomonosov Moscow State University (together with prof. O.E.Philippova)
- 2013 – present: Laboratory courses on polymer physics and chemistry for the 4th year graduate and 1st year postgraduate students at the Faculty of Physics of the Lomonosov Moscow State University

- 2013 – present: Supervision of the students' research work (9 diploma theses and 15 term papers were defended under the supervision of A.V.Shibaev)
- 2012: Lecture “Combining electron microscopy, fluorescent spectroscopy and rheometry for studying polymers and colloidal systems” at the school for young scientists on physical chemistry of polymers and colloidal systems, MSU
- 2010: Practical courses on physics for students of the 1st and 2nd years of the Departments of Geology and Biology of MSU

## **ORGANIZATIONAL WORK:**

- 2019: Russian-French seminar on responsive networks and colloids (Moscow, September 17-19, 2019), member of the organizing committee
- 2018 – present: Russian-German traveling seminar “Nanomaterials and large-scale research centers”, member of the organizing committee
- 2018: Russian-French seminar “Recent developments in soft matter” (Moscow, June 4-5, 2018), member of the organizing committee
- 2008 - present: Moscow and All-Russian festivals of science, member of the organizing committee (from 2013 – member of the program committee)
- 2009 - 2013: Participated in the coordination of the Russian National contact point «Ideas» of the 7th Framework programme of the EU
- 2012: Participated in the organization of the Moscow Physics Olympiad
- 2012: International conference "Green enterprising and university innovation for a sustainable future", Moscow, Russia, member of the organizing committee
- 2011: International scientific and practical conference “Mikhail Lomonosov and modern European scientific and educational tradition”, Moscow State University, member of the organizing committee

## **LANGUAGES:**

- Russian (native)
- English (advanced)
- French (C1+ certificate of IFALPES school in 2019, <https://ifalpes.com/>)

## **OTHER INTERESTS:**

Traveling, basketball, sailing  
Member of the sailing club of Duingt (France)