

Curriculum Vitae

ROSSITZA G. ALARGOVA

POSITION/AFFILIATION Postdoctoral Research Associate
Department of Chemical Engineering,
North Carolina State University (NCSU),
346 Riddick Hall, Raleigh, NC 27695-7905
Phone: +1-919-513-4648; e-mail: rgalargo@unity.ncsu.edu

EDUCATION

Ph.D., Physical Chemistry, Sofia University, Sofia, Bulgaria, 1999
Thesis: "*Properties of Micelles and Macromolecules Studied by Using Light Scattering and Fluorescence*",
Advisors: Prof. P. A. Kralchevsky, Prof. R. Zana (CNRS, France).

M. Sc., Environmental Science, Sofia University, Sofia, Bulgaria (EU TEMPUS Project), 1995.
Thesis: "*Light Scattering Study of Sodium Dodecyl Polyoxyethylene-2 Sulfate Micelles in the Presence of Multivalent Counterions*",
Advisors: Prof. P. A. Kralchevsky, Dr. D. N. Petsev.

M. Sc., Chemical Engineering (Organic Synthesis) High Institute of Chemical Technology, Burgas, Bulgaria, 1986.
Thesis: "*Immobilized Catalysts in Esterification*",
Advisor: Prof. R. Boeva.

PROFFESIONAL EXPERIENCE

July, 2003 – to present Postdoctoral Research Associate, Department of Chemical Engineering, NCSU
Synthesis and self-assembly of particles with anisotropic shape, and/or dipolar charge.

1999 - 2003 Research Scientist, The DEEPSTAR Group, Japan Marine Science and Technology Center, Yokosuka, Japan.
Colloid science in sub- and supercritical water. Dispersions of fullerenes in polar solvents.

1989- 1999 Research Chemist, Laboratory of Thermodynamics and Physicochemical Hydrodynamics, Faculty of Chemistry, Sofia University, Sofia, Bulgaria
Surfactant self-assembly in the presence of additives; Colloidal interactions; Characterization of particles, emulsions, proteins, and polymers by dynamic, static and electrophoretic light scattering; Studying surfactant behaviour in relation to their foamability, antifoaming and washing action; Ultrafiltration and reverse osmosis.

May – Sep., 1997 Visiting Scholar, Institute Charles Sadron, Centre National de Recherche Scientifique (CNRS), Strasbourg, France, with Prof. R. Zana.
Time-resolved (TRFQ) and steady-state fluorescence quenching (SSFQ) study of pure and mixed surfactant solutions; Comparative study of TRFQ and SSFQ.

July – Dec., 1993 Visiting Scholar, Centre de Recherche Paul Pascal, CNRS, Pessac, France, with Dr. F. Nallet.
Dynamic light scattering study of smectic liquid crystals.

1986-1989 Chemist, Pharmaceutical Co., Pestera, Bulgaria
Supervising analytical laboratory for chemical and microbiological analyses of antibiotics.

TEACHING EXPERIENCE

1995-1999 Teaching assistant for undergraduate and graduate courses in "Transport Phenomena and Separation Processes", and "Interfacial Phenomena and Stability of Dispersions".

1996-1999 Co-advisor of four M.Sc. Theses in Physical Chemistry.

RESEARCH INTERESTS

- Colloid and Interface Science: Particle synthesis, modification, and self-assembly; Surfactant self-association; Colloidal interactions; Behavior of dispersions and macromolecules in the presence of additives; Protein interactions; Surfactant/Polymer interactions.
- Nanoscience: Formation and properties of nanoparticles, nanostructures, and nanocomposites; Fullerenes; Carbon nanotubes.
- Supercritical Fluids: Emphasis on colloid and interface chemistry.
- Chemical Physics: Interaction of radiation with matter; Photonic crystals.

PROFESSIONAL SOCIETIES

- American Chemical Society

ACADEMIC ACTIVITIES

- Reviewer for J. Am. Chem. Soc., and Colloid and Polymer Science.
- More than 120 citations in papers by other authors.

HONOURS

- Listed in 7th Edition (2003-2004) of Marquis Who is Who in Science and Engineering.

LANGUAGES

- Bulgarian (native), English, French, Russian.