

Curriculum vitae

Alfred Blume

Professor of Physical Chemistry
Martin-Luther-University Halle-Wittenberg
Faculty of Chemistry and Physics
Institute of Chemistry
Von-Danckelmann-Platz 4, D-06120 Halle (Saale), Germany
Tel.: ++49-345-5525850
Fax: ++49-345-5527157
Email: alfred.blume@chemie.uni-halle.de

Education

1966-1971 Study of chemistry, University of Tübingen and University of Freiburg, Germany
1971 Diploma thesis in Physical Chemistry, University of Freiburg
1976 Dr. rer. nat. in Physical Chemistry, University of Freiburg
1980-81 Post-Doc Massachusetts Institute of Technology, Cambridge, Mass., USA
1983 Habilitation in Physical Chemistry, University of Freiburg

Professional Career

1976 – 83 Senior Research Assistant (Habilitation), University of Freiburg
1983-88 Privatdozent (Assistant Professor) University of Freiburg
1988 Professor of Physical Chemistry, University of Kaiserslautern
1996-97 Research group leader "Liquid-crystalline systems" of the Max-Planck-Gesellschaft at the Institute of Physical Chemistry, Martin-Luther-University Halle-Wittenberg
1997 Professor of Physical Chemistry, Martin-Luther-University Halle-Wittenberg
1998-2006 Director of Institute of Physical Chemistry, Martin-Luther-University Halle-Wittenberg
2003 Research Prize 2003 of the European Society for Applied Physical Chemistry
2003-2006 Dean of Department of Chemistry, Martin-Luther-University Halle-Wittenberg
2004-2010 Member of the Senate of the Martin-Luther-University Halle-Wittenberg
2006-2010 Vice-Dean of the Faculty of Chemistry and Physics

Research Interests

Self-assembly of amphiphilic molecules: micelles, nanofibers and nanoparticles, lyotropic phases, monomolecular films at interfaces, biological model membranes.

Structure and dynamics of amphiphilic molecules: x-ray scattering on lyotropic systems, thermodynamic investigations with calorimetric methods (DSC, ITC), spectroscopic investigations using NMR-, FT-IR-, Raman-spectroscopy, FT-IR-reflection spectroscopy at interfaces, kinetics of phase transitions in lyotropic systems (stopped-flow-technique, pressure jump methods with UV-Vis, IR, light scattering and NMR detection).

Interactions of peptides and proteins with monolayers and model membranes: calorimetry (ITC, DSC) on lipid-protein-vesicles, FT-IR-spectroscopy of lipid-protein-vesicles and solid supported membranes, FT-IR-reflection-absorption-spectroscopy (IRRAS) on monomolecular films of lipids and proteins at the air-water interface, AFM of solid supported membranes