

# Curriculum vitae

## Alfred Blume

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### *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