

## Реализирани международни научно- изследователски проекти за периода 2002-2009г.

№	Година	Тема на проекта	Ръководител на проекта
1.	1999 - 2007	“Mechanisms of the enzymatic hydrolysis	Prof. Ivan Panaiotov , D.Sc.
2.	2004-2009	“Centre of Applied Spectroscopy, International Summer Schools of Instrumental Analysis”	Prof. Michael Spiteller Prof. Tsonko Kolev Assoc. Prof. Bojidarka Koleva
3.	2002-2007	Synthesis and action of porous electro- and photocatalytic coatings	Dr. S. Sotiropoulos, Prof. I. Poulivos ;Dr. G. LiPuma; Prof. St. Armyanov, D.Sc. Prof. Dr. L. Petrov, D. Sc. Assoc. Prof. Dr. D. Todorovsky, Assoc. Prof. Dr. C. Dushkin (SU)
4.	2004-2008	“Synthesis of new biologically active substances”	Assoc. Prof. Ognyan Petrov, Ph.D.
5.	2004-2007	“Screening methods for Water data Information in support of the implementation of the Water Framework Directive	Catherine Gonzalez, Armines/Ecole des Mines d’Ales, France
6.	2004-2007	"Aerosol Source Analysis for Vienna (AQUELLA)"	Prof. Dr. Hans Puxbaum, Chemical Technologies and Analytics, Technical University of Vienna, Austria.
7.	2003-2006	“Microplates-reinforced Composites (MPC) From Polymer Blends – New Materials with Improved Barrier Properties”	Prof. Klaus Friedrich, Dr. Dr. h.c., University of Kaiserslautern
8.	2007-2010	“Photozyme Nanoparticle Applications for Water Purification, Textile Finishing, Photodynamic Biomineralization and Biomaterials Coating	Prof. Georg Georgiev, D. Sc.
9.	2008-2011	Production and Processing of the Biodegradable Polymers	Prof. G. S. Georgiev
10.	2003-2006	“An Interdisciplinary Approach to the Coordination Chemistry of Cations in Zeolites”	Prof. Notker Rösch, Dr., Dr. h.c. Prof. Helmut Knözinger, Dr
11.	2005-2008	“Self-association under confinement”	Prof. Emil Manev, DSc
12.	2006 -2008	“Integrated environmental screening/monitoring by bioindicators and magnetic	Privat Doz. Dr Viktor

		proxies”	Hoffmann , University of Tuebingen, Germany
13.	2005-2007	“Inulin polymeric surfactants as foam and emulsion stabilizers: model investigations”	Prof. D. Exerowa
14.	2009-2010	“New organic Materials with nonlinear-optical properties”	Prof. William Sheldrick Prof. Michael Spiteller Assoc. Prof. Bojidarka Koleva
15.	2008-2009	“Design and elucidation of new organic materials with application in optical technologies”	Prof. Michael Spiteller, Prof. Tsonko Kolev ,Assoc. Prof. Bojidarka Koleva
16.	2005-2006	“Synthetic Double-Network Hydrogels natural Bionanocomposites”	Prof. George Georgiev, D. Sc.
17.	2005-2006	Preparation of MFC structured materials based on different polymer blends	Prof. Michael Evstatiev, Faculty of Chemistry
18.	2006-2007	“Pearl’s cosmetics”	Assoc. Prof. Ognyan Petrov, Ph.D
19.	2008-2009	“Interaction of Peptides and Li ions”	Prof. Dr. Sci. Svetlana Simova- Bulgarian
20.	2007-2008	“New polymer materials for nonlinear optical applications and implementation of all optical poling technique for realization of cascaded nonlinear optical processes”	Prof. Ivan Petkov, D. Sc. – Sofia university, Bulgaria
21.	2006-2007	“Computational Study of Chromophore-DNA Complexes as Building Blocks for Nano-Devices: Short Hairpin Duplexes vs. Long B-DNA”	Chief Assist. Prof. Anela Ivanova, Dr
22.	2003, 2007-2008	“Transition metal complexes with small peptides as new anticancer agents”	Prof. Assoc. William Sheldrick Prof. Bojidarka Koleva, PhD.
23.	2005	“Organization and Carrying-out the QUA-NAS Technical Meeting 1a for Proficiency”	Prof. Dimiter L. Tsalev, Fac. Chem., Univ. Sofia
24.	2006	“Synthesis and characterization of new ion-imprinted polymer”	Chief Assist. Prof. Ivanka Dakova, Dr.
25.	2006	“Ab Initio (DFT) study of organic-inorganic spin hybrid structures with potential application in information storage and retrieval devices”	Prof. Martin Baumgarten, Dr Assoc. Prof. Alia Tadjer, Dr.
26.	2006	“Influence of surfactant adsorption on foam stability”	Dr. Stoyan Karakashev
27.	2007	The Colloid Structural Forces as a Tool for Particle Characterization and Control of Dispersion Stability	E.S. Basheva, K.D. Danov, and P.A. Kralchevsky
28.	2007	Dynamics of Adsorption from Micellar Surfactant Solutions at Expanding Fluid Interfaces in Relation to the Emulsification Process	K.D. Danov, P.A. Kralchevsky, N.D. Denkov,

			K.P. Ananthapadmanabhan, A. Lips
29.	2007	Mechanism of Drop Detachment from Micro-Pores with Application to Membrane Emulsification.	K.D. Danov, P.A. Kralchevsky, N.C. Christov, D.K. Danova,
30.	2007	Electric Interaction of Particles at a Fluid Interface in Relation to the Production of Pickering Emulsions	P.A. Kralchevsky, K.D. Danov, N.C. Christov, M.P. Boneva
31.	2007	On the Interaction and Ordering of Colloidal Particles at Interfaces	P.A. Kralchevsky,
32.	2007	“Emulsification in turbulent flow: Experiment and data interpretation”	S. Tcholakova, N. Vankova, N. Denkov
33.	2007	“Experiments and modeling of the friction between bubble/drop and solid wall”	N. Denkov, S. Tcholakova, K. Golemanov
34.	2007	“Optical observations of dynamic wetting films formed between bubbles and moving solid substrate”	K. Golemanov, S. Tcholakova, N. Denkov
35.	2008	“Surface Rheology of Structured/ Entangled Layers” “Functionalized Materials and Interfaces”	T.D. Gurkov, E.K. Kostova, B.D. Nenova, W. Gaschler
36.	2008	“Effect of Electric-Field-Induced Capillary Attraction on the Motion of Particles at an Oil-Water Interface” “Functionalized Materials and Interfaces”	M.P. Boneva, N. C. Christov, K.D. Danov and P.A. “Kralchevsky
37.	2008	"Drop breakage and coalescence in turbulent flow" “Physico-chemical and flow behavior of droplet-based systems”,	N. D. Denkov, S. Tcholakova. I. B. Ivanov,
38.	2008	“Theoretical Model of Viscous Friction Inside Steadily Sheared Foams and Concentrated Emulsions”	S. Tcholakova, N.D. Denkov, K. Golemanov, K.P. Ananthapadmanabhan, A. Lips
39.	2008	“Bubble Breakup in Steadily Sheared Foams and Concentrated Emulsions”	K. Golemanov, S. Tcholakova, N.D. Denkov, A. Lips
40.	2008	“Surface Dilatational Rheology Measurements for Oil/Water Systems with Viscous Oils”	N. Aleksandrov, K. G. Marinova, K.D. Danov, I.B. Ivanov
41.	2008	“Specific Counterion effect for Adsorption of Ionic Surfactant at Oil/Water Interface”	K. Marinova, D.T. Dimitrova, K.D. Danov, I.B. Ivanov
42.	2008	“Effects of Surfactant and Electrolyte on the Liquid Transport by Foam: Overflowing-Foam-Column – Experiments and Theory”	P.A. Kralchevsky, K.D. Danov, I.G. Stoychev, V. Jovancevic

43.	2008	“Theoretical Model of Viscous Friction Inside Steadily Sheared Foams and Concentrated Emulsions”	N.D. Denkov, S. Tcholakova, K. Golemanov, K.P. Ananthapadmanabhan, A. Lips
44.	2008	“Bubble Breakup in Steadily Sheared Foam”	S. Tcholakova, N. Denkov, K. Golemanov, A. Lips,
45.	2008	“Comparison of Solid Particles Globular Proteins, and Surfactants as Emulsifiers”	Ivan B. Ivanov, Slavka Tcholakova, Nikolay D. Denkov and Alex Lips
46.	2008	“Liquid Transport by Foam: Overflowing-Foam-Column – Experiments and Theory”	Ivo Stoychev, Peter Kralchevsky, Krassimir Danov and Vladimir Jovancevic
47.	2008	“On the Mechanism of Drop Formation in Membrane and Micro-Channel Emulsification”	Nikolay Christov, Krassimir Danov and Peter Kralchevsky
48.	2008	“Surface Dilatational Rheology Measurements for Oil/Water Systems with Viscous Oils	Ivan B. Ivanov, Nikola Alexandrov, Krastanka G. Marinova and Krassimir D. Danov
49.	2008	“Particles at oil-water interfaces in relation to the design of new materials: Electrical repulsion versus capillary attraction”	P. Kralchevsky, K. Danov, M. Boneva
50.	2008	“Effect of the Counterions and the Hydrophobic Phase on the Adsorption of Ionic Surfactants” “Effect of the Counterions and the Hydrophobic Phase on the Adsorption of Ionic Surfactants”	I.B. Ivanov, K.D. Danov, K. Marinova, D. Dimitrova, K.P. Ananthapadmanabhan, A. Lips
51.	2008	“Equation of State of Caseinate Monolayers and Stability of Food Foams and Thin Films”	I.B. Ivanov, K.G. Marinova, B. Nenova, E. Basheva, K.D. Danov, A. Mirarefi and B. Campbell,
52.	2008	“The Drop Size in Membrane Emulsification Determined from the Balance of Capillary and Hydrodynamic Forces”	N.C. Christov, K.D. Danov, D.K. Danova, P.A. Kralchevsky,
53.	2008	“Strong Hybrid Electro-Gravity Induced Capillary Attraction between Charged Particles at a Fluid Interface”	M.P. Boneva, K.D. Danov, N.C. Christov, P.A. Kralchevsky
54.	2008	“Interaction Forces between Two Like-Charged Colloidal Particles at a Liquid Interface: Electric Repulsion vs. Electrocapillary Attraction”	K.D. Danov, P.A. Kralchevsky, M.P. Boneva

55.	2008	“Liquid Transport by Foam: Overflowing-Foam-Column – Experiments and Theory”	I.G. Stoychev, P.A. Kralchevsky, K.D. Danov, V. Jovancevic,
56.	2008	“Oscillatory-Structural and Depletion Forces Due to Charged Surfactant Micelles: Theory vs. Experiment”	K.D. Danov, E.S. Basheva, P.A. Kralchevsky, K.P. Ananthapadmanabhan, A. Lips
57.	2008	“Formation and Coexistence of Crystallites and Micelles in Carboxylate Soap Solutions and Their Foaminess”,	P.A. Kralchevsky, K.D. Danov, N.C. Christov, C.I. Pishmanova, M.P. Boneva, S.D. Kralchevska, K.P. Ananthapadmanabhan, A. Lips
58.	2008	“The Maximum Bubble Pressure Method: Universal Surface Age and Transport Mechanisms in Surfactant Solutions”	N.C. Christov, K.D. Danov, P.A. Kralchevsky, K.P. Ananthapadmanabhan, A. Lips
59.	2008	“Coexistence of Micelles and Crystallites in Carboxylate Soap Solutions: Soft Matter vs. Solid Matter”	P.A. Kralchevsky, K.D. Danov, M.P. Boneva, C.I. Pishmanova, N.C. Christov, S.D. Kralchevska, K.P. Ananthapadmanabhan, A. Lips
60.	2008	“Role of Surfactants in Foam Rheology”, “ <i>Surfactants</i> ”	N. Denkov, S. Tcholakova, A. Lips
61.	2009	“EVEREST ( №229779)”	Prof. Tonny Spassov, Dr., DSc, Prof. Georgy Vayssilov, PhD, DSc, Assoc. Prof. Bojidarka Koleva, PhD., Assist. Prof. Rositcha Nikolova
62.	2009	“Protease activity: Role of surfactants and calcium”,	N. D. Denkov, S. Tcholakova
63.	2009	“Forces between Surfaces	P.A. Kralchevsky,
64.	2009	“Physico-chemical factors controlling the foamability and foam stability of milk proteins”	K. Marinova, E.S. Basheva, I.B. Ivanov,
65.	2009	“Emulsification and emulsion stability of silica-charged silicone oils”	S. Tcholakova, N. Denkov, D. Hristova

66.	2009	“Jamming in sheared foams and emulsions, explained by critical instability of the films between neighboring bubbles and drops”	N. Denkov, S. Tcholakova, K. Golemanov, A. Lips
67.	2009	“Surface dilatational rheological properties of surfactant mixtures”	D. Dimitrova, F. Ravera, L. Liggieri, S. Tcholakova, K. Marinova
68.	2009	“Strong hybrid electro-gravity-induced capillary attraction between charged particles at a fluid interface”	M. Boneva, K.D. Danov, N.C. Christov, P.A. Kralchevsky
69.	2009	“Viscous Friction Inside Steadily Sheared Foams and Concentrated Emulsions“,	N. D. Denkov, S. Tcholakova, K. Golemanov, K. P. Ananthapadmanabhan and Alex Lips
70.	2009	“Drop Breakage During Emulsification - Experiments and Data Interpretation”,	S. Tcholakova, N.D. Denkov, N. Vankova and T. Danner
71.	2009	“Surfactant Mixtures with High Surface Modulus – Characterization and Application in Foam Studies” , “Surfactant Mixtures with High Surface Modulus – Characterization and Application in Foam Studies” - oral presentation	N. D. Denkov, D. Dimitrova, S. Tcholakova, K. Marinova, Libero Liggieri and Francesca Ravera
72.	2009	“Selection of Surfactants for Improved Foam Properties”,	N. D. Denkov, S. Tcholakova, K. P. Ananthapadmanabhan and Alex Lips
73.	2003–2005	“Improving the infrastructure for metrology in chemistry in the candidate new member states”	Prof. Dr. Carmen Camara University Complutense, Madrid, Spain
74.	2003–2005	“G7RT-CT-2002-05104 Project “VIRM, The European Virtual Institute for Reference Materials	Dr. Kees Kramer, Mermayde, Bergen
75.	2004–2005	Theoretical characterization and practical realization of the synthesis of immobilization matrix for metal-organic complexes	Assoc. Prof. Dr. M. Milanova
76.	2003–2007	“Structuring of Polymers”	Prof. Natalia Gospodinova, Dr. Assoc. Prof. Alia Tadjer, Dr.
77.	2004–2009	Nanomaterials for photochemical and photoelectrochemical purification processes	Dr. S. Sotiropoulos, (Aristotel University) Dr. G. LiPuma (Nottingham University) Prof. St. Armyanov, D.Sc. (IPhCh, BAS) Prof. Dr. L. Petrov, D. Sc.

			(IC, BAS) Assoc. Prof. Dr. C. Dushkin (SU)
78.	2004–2009	“Modeling of sorption and reactivity of hydrocarbons in zeolites containing extraframework metal species”	Prof. Notker Rösch, Dr., Dr. h.c. Assoc. Prof. Georgi Vayssilov, D. Sc
79.	2006 – 2007	“Spectroscopy of rare earth doped solids at elevated temperatures”	Assoc. Prof. Dr. S. Gutzov, Prof. Dr. K.-D. Becker
80.	2007–2011	Luminescence complexes of rare and rare earth elements immobilized in SiO <sub>2</sub> -based matrices	Assoc. Prof. Dr. M. Milanova, Prof. I. Bernhardt
81.	2009–2010	“Dynamic Effects in Thin Liquid Films”	Dr Stoyan Karakashev
82.	2009–2011	“Design of Foams with Preliminary Entailed Durability”	Dr Stoyan Karakashev
83.	2006, 2007, 2009	“Design synthesis, spectroscopic and structural elucidation of organic Materials with nonlinear-optical application	Pr Prof. Tsonko Kolev Michael Spittler, Assoc. Prof. Bojidarka Koleva
84.	2002 -05	“Microplates “Phase Change Material Slurries”	Prof.Peter KralchevskyDSc; Prof.Nikolai Denkov DSc
85.	2002-05	“Interfacial rheology of 2D suspensions”	Prof.Ivan B.Ivanov,DSc.
86.	2002-07	Sintesis andaction of porous electro-and photocatalytic coatings	Dr.S.Sotiropoulos,Prof. I.Poulios Dr.G.liPuma; prof.St. Armyanov
87.	2003- 06	“ Microplates-reinforced Composites ( MPC) From Polymer Blends – New Materials with Improved Barrier Properties”	Prof. Klaus Friedrich, Dr. Dr. h.c.,
88.	2003-05	“Improving the infrastructure for metrology in chemistry in the candidate new member states”	Prof. Dr. Carmen Camara, University Complutence, Mardid, Spain Prof. S. Arpadjan
89.	2003-05	“G7RT-CT-2002-05104 Project “VIRM, The European Virtual Institute for Reference Materials”	Dr. Kees Kramer, Mermayde, Bergen, The Netherlands Prof. D. Tsalev

90.	2003-05	“Emulsions with Nanoparticles for New Materials (EMMA	Prof. Peter Kralchevsky, Prof.Nikolai Denkov (leaders of Bulgarian team)
91.	2004-05	Theoretical characterization and practical realization of the synthesis of immobilization matrix for metal-organic complexes	Assoc. Prof. Dr. M. Milanova
92.	2004-05	“Antifoam effect of high-molecular weight silicones”	Prof. Nikolai D. Denkov