

## ПРИЛОЖЕНИЕ

### Проектна дейност, публикации участие в конференции и специализации - направление «Физикохимия».

#### *I. Одобрени и действащи проекти под ръководството или с участието на направление «Физикохимия».*

##### **НФ „Научни Изследвания“ 2007 – 2011**

1. НТ1-01/2004 (2004-2009), Б. Радоев, М. Аврамов
2. НТ-1-04/2004, (2004-2009), Хр. Василиев, И. Панайотов, Цв. Иванова, Н. Грозев
3. ВУХ 08/05, (2005 – 2008), Ст. Гуцов, Н. Петкова, К. Джунева
4. ДО-02-107/2008, Хр. Василиев, Цв. Иванова, Н. Грозев, Кр. Мирчева
5. ДО-02-49/2008, К. Балашев, Б. Радоев
6. ДО-02-83/2008, К. Балашев
7. UNION - ДО 02-82/2008, Ст. Гуцов, Н. Петкова
8. ДЦВП 02-2/2009, Ст. Гуцов, Н. Петкова
9. ТК 02/26 - 2009, Ст. Гуцов, Н. Петкова, К. Джунева
10. ДРГ 02/3 -2010 Р. Цеков, Ст. Каракашев
11. X-1313, Е. Манев, Хр. Василиев, С. Сазданова
12. ДДВУ 02-12/2009, Р. Славчов, Ст. Каракашев, Н. Грозев, Р. Цеков, Б. Радоев, А. Иванова
13. ДДВУ 02-54/2010, Ст. Каракашев, Е. Манев, Р. Цеков, Р. Славчов

##### **Международни проекти по НИС**

1. FP7 BeyondEverest: Р. Цеков, К. Балашев, Хр. Василиев, Цв. Иванова, Ст. Гуцов
2. FP7 EFFiHEAT: Ст. Гуцов, Н. Данчова
3. FP6 INTERCONY: Ст. Гуцов

### **Одобрени проекти по международни програми**

1. FP7, regpot 2, EVEREST 2008-2009, Evaluation of the research quality and capability of the Faculty of Chemistry and defining of an action plan, Р. Цеков
2. Динамични ефекти в ТТФ, Ст. Каракашев
3. Дизайн на пяна с предварително зададена пенна стабилност, Ст. Каракашев
4. Динамика на тънки филми върху структурирани подложки, Ст. Каракашев
5. Belgian company ORAFIT Bio Based Chemicals, Belgium, М. Недялков
6. Italian company CHIESI Farmaceutics S.p.A, М. Недялков
7. Европейски Мари Кюри Проект SOCON 512331, Е. Манев, Хр. Василиев, Б. Радоев, С. Сазданова, Р. Славчов
8. Влияние адсорбцията на ПАВ върху пенна стабилност, Ст. Каракашев

### **Проекти, финансирани от СУ – НИС 2007 – 2011**

1. СУ 225/2008, М. Аврамов
2. СУ 95/2008, Н. Грозев, М. А. Недялкова
3. СУ 158/09, Ст. Гуцов, Н. Петкова, К. Джунева
4. СУ 117/2009, М. Аврамов
5. СУ 181/2009, К. Балашев, Р. Славчов
6. СУ 2010, М. Аврамов
7. СУ 069/2010, Р. Славчов
8. № 178/2011, Н. Грозев, Р. Славчов, К. Балашев, Ст. Каракашев
9. СУ XXX/2012, Р. Цеков, Н. Грозев, Р. Славчов
10. СУ XXX/2012, К. Балашев, Р. Славчов

### ***II. Публикации***

#### ***Списък на важни публикации в чуждестранни издания 2007 – 2011***

##### **2007**

1. R. Slavchov, T. Ivanov, B. Radoev, Screened potential of a charged step defect on a semiconductor surface, J. Phys.: Condens. Matter 19 (2007) 226005.
2. M. Nedyalkov, L. Alexandrova, D. Platikanov, B. Levecke, Th. Tadros, Wetting Films on a Hydrophilic Silica Surface Obtained from Aqueous Solutions of Hydrophobically Modified Inulin Polymeric Surfactant, Colloid & Polymer Science 285 (2007) 1713-1717.

3. M. Nedyalkov, C. Sultanem, J.-J. Benattar. Contact Angles of Protein Black Foam Films under Dynamic and Equilibrium Conditions, *Centr. Eur. J. Chem.* 5 (2007) 748-765.
4. A. Ivanova, N. Rösch, The Structure of LNA:DNA Hybrids from Molecular Dynamics Simulations: The Effect of Locked Nucleotides, *J. Phys. Chem. A* 111 (2007) 9307-9319.
5. C. Stubenrauch, D. Langevin, D. Exerowa, E. Manev, P. M. Claesson, L. B. Boinovich, R. v. Klitzing, Comment on “Hydrophobic Forces in the Foam Films Stabilized by Sodium Dodecyl Sulfate: Effect of Electrolyte” and Subsequent Criticism, *Langmuir* 23 (2007) 12457-12460.
6. J. Angarska, C. Stubenrauch, E. Manev, Drainage of foam films stabilized with mixtures of non-ionic surfactants, *Colloids and Surfaces A: Physicochem. Eng. Aspects* 309 (2007) 189–197.
7. B. V. Toshev, Metastability and Lability in Surface Phase Transitions: Surface Forces and Line Tension Effects, In.: T.F. Tadros (Ed.) *Colloid Stability. Volume 1. The Role of Surface Forces – Part 1.* Wiley-VCH, Weinheim, 2007, 420 pp. ISBN 978-3-527-31462-1 (pp. 335-352).
8. B. V. Toshev, Reflections on Dimo Platikanov in Commemorating His 70th Birthday, *Adv. Colloid Interface Sci.* 132 (2007) 47-50.
9. B. V. Toshev, A New Theory for Barrier-Less Heterogeneous Condensation, *Areevu – Get Scienced* 13 April 2007, p. 1-3.
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12. S. Gutzov, M. Lerch, Nitrogen incorporation into pure and doped zirconia, *Ceramics Intern.* 33 (2007) 147-150.
13. S. Gutzov, A. Börger, K. D. Becker, High temperature optical spectroscopy of cubic holmium doped zirconia,  $Zr_{0.78}Y_{0.21}Ho_{0.01}O_{1.90}$ , *Phys. Chem. Chem. Phys.* 9 (2007) 491-496.

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15. S. I. Karakashev, E. D. Manev, R. Tsekov, A. V. Nguyen, Effect of ionic surfactants on drainage and equilibrium thickness of emulsion films, *J Colloid Interface Sci* 318 (2008) 358.
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19. P. M. Kruglyakov, S. I. Karakashev, A.V. Nguyen, N.G. Vilkova, Foam Drainage, *Curr. Opin. Coll. Interface Sci.* 13 (2008) 163-170.
20. S.I. Karakashev, E. D. Manev, A.V. Nguyen, Effect of Double-Layer Repulsion on Foam Film Drainage, *Colloids and Surfaces A* 319 (2008) 34-42.
21. S. I. Karakashev, A. V. Nguyen, J. D. Miller, Equilibrium adsorption of surfactants at the gas-liquid interface, In: R. R. Narayanan and J. Berg (Eds.), *Advances of Polymer Science*, Springer-Verlag, 218(1) (2008) 25-55.
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27. M. Nedyalkov, L. Alexandrova, D. Platikanov, B. Levecke, Th. Tadros, Wetting Properties of Aqueous Solutions of Hydrophobically Modified Inulin Polymeric Surfactant, *Colloid & Polymer Science* 286 (2008) 713-719.
28. D. Platikanov, D. Exerowa, *Thin Liquid Films and Foams: Classic and Modern Topics*, *Curr. Opin. Coll. Interface Sci.* 13 (2008) 97.
29. E. Vladimirov, A. Ivanova, N. Rösch, Solvent Reorganization Energies in A-DNA, B-DNA, and Rhodamine 6G–DNA Complexes from Molecular Dynamics Simulations with a Polarizable Force Field, *J. Phys. Chem. B* 113 (2008) 4425–4434.

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54. S. I. Karakashev, R. Tsekov, E. D. Manev, AV Nguyen, Elasticity of foam bubbles measured by profile analysis tensiometry 2010 *Colloids Surf A* **369** 136.
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61. S. I. Karakashev, D. S. Ivanova, E. D. Manev, R. Kirilova, R. Tsekov, An experimental test of the fractal model for drainage of foam films, *J. Colloid Interface Sci.* 353 (2011) 206.
62. S. I. Karakashev, R. Tsekov, Electro-Marangoni effect in thin liquid films, *Langmuir* 27 (2011) 2265.
63. R. Tsekov, Quantum diffusion, *Phys. Scr.* 83 (2011) 035004.
64. O. Ozdemir, H. Du, S. I. Karakashev, A. V. Nguyen, J. D. Miller, Understanding the role of ion interactions in soluble salt flotation with alkylammonium and alkylsulfate collectors, *Adv. Coll. Interface Sci.* 163 (2011) 1-22.
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72. S. I. Karakashev, N. Grozev, I. Diez, R.H.A. Ras, R. Tsekov, Rheology of silver nano-cluster solutions under confinement 2011 *Colloids Surf. A* **384** 570.

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***Списък на някои публикации в български издания 2007 – 2011***

1. K. Djuneva, S. K. Peneva, The state of SnO<sub>2</sub>-V grown on the surface of oxidized molten tin, Ann. 'Universite de Sofia "St. Kl. Ohridski", Fac. de chimie 100 (2008) 129-143.
2. R. Slavchov, B. Radoev, Electrical Charged Heterogeneous Interfaces. Electrostatic Potential Distribution, Ann Univ Sofia 100 (2008) 193.
3. M. Nedyalkov, L. Alexandrova, D. Platikanov, B. Levecke, Th. Tadros, Wetting Contact Angles and Thickness of Thin Wetting Films from Aqueous Solutions of the Polymeric Surfactant Inutec SP1, In: Nanoscale Phenomena and Structures (D. Kashchiev, editor), Prof. Marin Drinov Academic Publishing House, Sofia, 2008, p. 151-154.
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7. S. I. Karakashev, Design of Foam and Froths with Entailed Durability, Parliament Magazine: Research Review 11 (2009) 17.
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12. R. Tsekov, D.S. Ivanova, R. Slavchov, B. Radoev, E. D. Manev, A.V. Nguyen, S. I. Karakashev, A new model for the kinetics of drainage of thin liquid films with ionic surfactants 2010 Ann Univ Shumen Fac Chem **20** 109.
13. R. Tsekov, Electric double layer in concentrated solutions of ionic surfactants 2011 Ann Univ Sofia Fac Chem **102/103** 177.
14. R. Tsekov, Ermakov equations in quantum mechanics 2011 Ann Univ Sofia Fac Chem **102/103** 185.
15. R. Tsekov, Thermo-quantum diffusion in periodic potentials 2011 Ann Univ Sofia Fac Chem **102/103** 247.
16. R. Tsekov, Flocculation of vesicles 2011 Ann Univ Sofia Fac Chem **102/103** 253.
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18. I. T. Ivanov, I. Petkova, B. P. Soklev, I. V. Delcheva, B. Iliev, Thomas, J.S. Schubert, M. G. Bogdanov, R. Slavchov, Wetting properties of low-viscosity room temperature imidazolium ionic liquids, Ann Univ Sofia 103 (2011).

### *III. Конференции*

#### *Участие в международни конференции 2007 – 2011*

1. Ст. Гуцов, Bunsentagung 2007, Graz, Austria
2. Ст. Гуцов, International scientific conference Unitech'07, 2007, Bulgaria
3. Д. Платиканов, 2nd Iberic Meeting of Colloids and Interfaces, Coimbra, Portugal, 11-13 Yule, 2007
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28. С. Каракашев, 20-та конференция на Европейско химично общество по повърхностите
29. С. Каракашев, 35-та Австралийска конференция по химично инженерство
30. С. Каракашев, 21-ва конференция на Европейско химично общество по повърхностите
31. С. Каракашев, 36-та Австралийска конференция по химично инженерство
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1. Ст. Гуцов TU Braunschweig, Germany, 2006-2007, гост-професор
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3. К. Балашев - 01.07.2007- 15. 09.2007, Център по Нанонауки, Копенхагенски университет. Дания
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