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Education Background and Degrees:

1995: BSc (Hons), Chemical Physics, Sofia University, Bulgaria.
Thesis: "Estimation of Photo-chemical accumulation of energy in series of benzo-tiazolil - a quantum-chemical investigation".

1997: MSc, Laboratory of Thermodynamics and Physico-Chemical Hydrodynamics, Sofia University, Bulgaria.
Thesis: "Phase behaviour of water solutions containing mixtures of Polyoxyethylene-10-lauryl- and Polyoxyethylene-4-lauryl- ether".

2002: PhD, Department of Physical Chemistry, Sofia University.
PhD supervisor: Professor Emil Manev.
Thesis: "Theoretical adsorption models and their application to ionic, nonionic and mixed surfactants on the air-water interface".

Employment, Positions, Academic Visits…:

2001 – 2003: Research Scientist, Institute of Biophysics, Bulgarian Academy of Sciences, Sofia; and Faculty of Chemistry, St. Kliment Ohridski Sofia University, Bulgaria.

Dec 2003 – May 2004: Visiting Academic, Chemical Engineering, The University of Newcastle, Australia

May 2004 – December 2006: Research Associate, Chemical Engineering, The University of Newcastle, Australia

January 2007 – December 2008, Research Associate, Chemical Engineering, The University of Queensland, Australia

January 2009 – September 2010, Project leader, Department of Physical Chemistry, Sofia University, Bulgaria

September 2010 – May 2013, Assist. Prof. in Physical Chemistry, Department of Physical Chemistry, Sofia University, Bulgaria

May 2013 – October 2019, Assoc. Prof. in Physical Chemistry, Department of Physical Chemistry, Sofia University, Bulgaria.

October 2019 – current, Prof. in Physical Chemistry, Department of Physical Chemistry, Sofia University, Bulgaria.

November 2010 – December 2010, Visiting Academic in Leibnitz Institute of Polymer Research, Dresden, Germany

June 2012, Visiting Academic in The University of Utah, USA.

August 2012 – September 2012, Visiting Academic in Leibnitz Institute of Polymer Research, Dresden, Germany.

July 2013 – September 2013, Visiting Academic in Leibnitz Institute of Polymer Research, Dresden, Germany.

July 2014 – August 2014, Visiting Academic in the University of Cambridge, UK.

August 2016 – September 2016, Visiting Academic in the University of Illinois at Chicago, USA.

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Publications:

Book Chapters

1. Karakashev, S.I., Nguyen, A.V. and Miller, J.D., **2008**, "Equilibrium adsorption of surfactants at the gas-liquid interface." In: R. R. Narayanan and J. Berg (Eds.), Advances of Polymer Science, Springer-Verlag, Vol. 218 (1), pp. 25-55.

2. Slavchov, R.I., Karakashev, S.I., and Ivanov, I.B., **2014**, "Ionic surfactants and ion-specific effects: adsorption, micellization, thin liquid films." In "Surfactant Science and Technology: Retrospects and Prospects", Romsted, L.S. (Ed.), Taylor & Francis Group.

Referred Papers

3. Karakashev, S.I., Grozev, N.A., Hristova, S., Mircheva, K., Ozdemir, O., **2023**, "Electrostatic forces in control of the foamability of nonionic surfactant", Coatings, 13 (1), p.37.

4. Ata, S., Pan, Y., Bournival, G., Karakashev, S.I., Wang, L., **2022**, "Effect of electrolyte and flotation collector on foam films in the presence of frothers", Chemical Engineering Science, Vol. 264, 118176.

5. Karakashev, S.I, Grozev, N.A., Ozdemir, O., Guven, O., Ata, S., Bournival, G., Batjargal, K., Boylu, F., Hristova, S., Celik, M.S., **2022**, "Physical restrictions of the flotation of fine particles and ways to overcome them", Physicochemical Problems of Mineral Processing, Vol. 58 (5), 153944.

6. Batjargal, K., Guven, O., Ozdemir, O., Karakashev, S. I., Grozev, N., Boylu, F., Celik, M.S., **2022**, "Bubbling properties of frothers and collectors mixed systems", Physicochemical Problems of Mineral Processing, Vol. 58 (5), 152890.

7. Karakashev, S.I, Grozev, N.A., Ozdemir, O., Batjargal, K., Guven, O., Ata, S., Bournival, G., Boylu, F., and Çelik, M.S., **2021**, "On the frother's strength and its performance", Minerals Engineering, Vol. 171, 107093.

8. Amani, P., Karakashev, S.I., Grozev, N.A., Simeonova, S.S., Miller, R., Rudolph, V. and Firouzi, M., **2021**, "Effect of selected monovalent salts on surfactant stabilized foams", Advances in Colloid and Interface Science, Vol. 295, 102490.

9. Karakashev, S.I., Smoukov, S.K., Raykundaliya, N., Grozev, N.A., **2021**, "Duality of foam stabilization", Colloids and Surfaces A, Vol. 619, 126521.

10. Batjargal, K., Guven, O., Ozdemir, O., Karakashev, S.I., Grozev, N.A., Boylu, F., Çelik, M.S., **2021**, "Adsorption Kinetics of Various Frothers on Rising Bubbles of Different Sizes Under Flotation Conditions", Minerals, Vol. 11, p.304.

11. Karakashev, S.I. and Grozev, N.A., **2020**, "The law of parsimony and the negative charge of the bubbles", Coatings, Vol. 10, p. 1003.

12. Guven, O., Batjargal, K., Ozdemir, O., Karakashev, S.I., Grozev, N.A., Boylu, F., and Chelik, M.S., **2020**, "Experimental procedure for the determination of the critical coalescence concentration (CCC)", Minerals, Vol. 10, p. 617.

13. Karakashev, S.I., Grozev, N.A., Batjargal, K., Guven, O., Ozdemir, O., Boylu, F., and Chelik, M.S., **2020**, "Correlations for easy calculation of the critical coalescence concentration (CCC) of simple frothers, Coatings, Vol. 10 (7), p. 612.

14. Alexandrova L.A., Grigorov, L. S., Grozev, N.A., and Karakashev, S.I., **2020**, "Investigation of interfacial free energy of three-phase contact on a glass sphere in case of Cationic-Anionic Surfactant Aqueous Mixtures", Coatings, Vol. 10(6), 573, pp.1-14.

15. Karakashev, S.I., **2020**, "Ion-Specific Effects on Adsorption Layers of Ionic Surfactants", Applied Chemical Engineering, Vol. 3, (2), Article identifier:53-67

16. Karakashev S.I., Firouzi, M., Wang, J., Alexandrova, L., and Nguyen A.V., **2019**, "On the stability of thin films of pure water", Advances in Colloid and Interface Science, Vol. 268, pp. 82-90.

17. Sankaran, A., Karakashev, S.I., Sett, S., Grozev, N., and Yarin, A.L., **2019**, "On the nature of the superspreaders", Advances in Colloid and Interface Science, Vol. 263, pp. 1-18.

18. Karakashev, S.I., Stöckelhuber, K.W., Tsekov, R., Grozev, N., Simeonova, S., Raykundaliya, N., and Heinrich, G., **2018**, "Bubble rubbing on hydrophobic solid surface", Colloids and Surfaces A, Vol. 555, pp.638-645.

19. Karakashev, S.I., Raykundaliya, N., **2018**, "On the nature of the ion-specific effects", Nanotechnology in Science and Engineering, Vol.1 (1), pp. 21-60.

20. Shahir, A.A., Arabadzhieva, D., Petkova, H., Karakashev, S.I., Nguyen, A.V. and Mileva, E., **2017**, "Effect of Under-Monolayer Adsorption on Foamability, Rheological Characteristics and Dynamic Behavior of Fluid Interfaces: Experimental Evidence for the Guggenheim Extended Interface Model", Journal of Physical Chemistry C, Vol. 121 (21), pp.11472-11487.

21. Karakashev, S.I., and Smoukov, S.K., **2017**, "CMC Prediction for Ionic Surfactants in Pure water and Aqueous Solutions Based Solely on Tabulated Molecular Parameters", Journal of Colloid and Interface Science, Vol. 501, pp. 142-149.

22. Karakashev, S.I., **2017**, "Hydrodynamics of Foams", Experiments in Fluids, Vol. 58: 91, pp.1-40.

23. Shahir, A.A., Nguyen, A.V., and Karakashev, S.I., **2016**, "A Quantification of Immersion of the Adsorbed Ionic Surfactants at Liquid/Fluid Interfaces", Colloids and Surfaces A, Vol. 509, pp. 279-292.

24. Karakashev, S.I., **2015**, "Anomalous drainage of nano-films from concentrated NaCl solutions of tetraethylene glycol octyl ether (C8E4)", Chemistry: Bulgarian journal of science education, Vol. 24 (6), pp.922-929.

25. Sett, S., Karakashev, S.I., Smoukov, S.K., and Yarin, A.L., **2015**, "Ion-specific effects in foams", Advances in Colloid and Interface Science, Vol. 225, pp. 98-113.

26. Karakashev, S.I., and Smoukov, S.K., **2015**, "Fast Estimation of the Equilibrium Adsorption Constants of Ionic Surfactants with Account for Ion-Specific Effects", Colloids and Surfaces A, Vol. 467, pp. 143-148.

27. Alexandrova, L., Karakashev, S.I, Grigorov, L., Phan, Chi M., and Smoukov, S.K., **2015**, "Wetting Properties of Phospholipid Dispersion on Hydrophobic SiO2-glass plate", Advances in Colloid and Interface Science, Vol. 220, pp. 1-7.

28. Karakashev, S.I. and Manev, E.D., **2015**, "Hydrodynamics of Thin Liquid Films: Retrospective and Perspectives", Advances in Colloid and Interface Science, Vol.222, pp.398-412.

29. Karakashev, S.I., **2014**, "How to determine the adsorption energy of the surfactant's hydrophilic head? How to estimate easily the surface activity of every simple surfactant?", Journal of Colloid and Interface Science, Vo. 432, pp. 98-104.

30. Karakashev, S.I., Stöckelhuber, K.W., Tsekov, R., Phan, C., Heinrich, G., **2014**, "Tribology of Thin Wetting Films between Bubble and Moving Solid Surface", Advances in Colloid and Interface Science", Vol. 210, pp.39-46.

31. Bournival, G., Ata, S., Karakashev, S.I., and Jameson, G., **2014**, "An Investigation of Bubble Coalescence and Post-Rupture Oscillation in Non-Ionic Surfactant Solutions using High-Speed Cinematography", Journal of Colloid and Interface Science, Vol. 414, pp. 50-58.

32. Gutsov, S., Danchova N., Karakashev, S.I., Khristov, M., Ivanova, J., and Ulbikas, J., **2014**, "Preparation and Thermal Croperties of chemically Prepared Nanoporous Silica Aerogels", Journal of Sol-Gel Science and Technology, Vol. 70, pp. 511-516.

33. Karakashev, S.I., Stöckelhuber, K.W. Tsekov, R., Heinrich, G., **2013**, "Bubble Rubbing on Solid Surface: Experimental Study", Journal of Colloid and Interface Science, Vol.412, pp.89-94.

34. Tsekov, R., Borissov, D., and Karakashev, S.I., **2013**, "Wetting dynamics on lyophilic solid surfaces patterned by lyophobic islands", Colloids and Surfaces A, Vol. 423, pp.77-80.

35. Karakashev, S.I., Georgiev, P., and Balashev, K., **2013**, "On the Growth of Pneumatic Foams", The European Physical Journal E, Vol. 36 (13), pp.1-6.

36. Karakashev, S.I., Nguyen, A.V., and Tsekov, R., **2013**, "Effect of the Adsorption Component of the Disjoining Pressure on Foam Film Drainage", Colloid Journal, Vol. 75 (2), pp.1-5.

37. Tsekov, R., Grozev, N.A., Delcheva, I.V., Ivanov, I.T., Balashev, K., and Karakashev, S.I., **2012**, "Delta-Comb Potential in Modelling Three-Phase Contact Line (TPCL) on Periodically Patterned Surfaces", Journal of Physical Chemistry B., Vol. 116 (44), pp.13248-13253.

38. Vilkova, N.G., Elaneva, S.I., and Karakashev, S.I., **2012**, "Effect of Hexylamine Concentration on the Properties of Foams and Foam Films Stabilized by Ludox", Mendeleev Communications, Vol. 22, pp. 227-228.

39. Karakashev, S.I., Georgiev, P., and Balashev, K., **2012**, "Foam Production – Ratio between Foaminess and Rate of Foam Decay", Journal of Colloid and Interface Science, Vol. 379, pp.144-147.

40. Karakashev, S.I. and Grozdanova, M., **2012**, "Foams and Antifoams", Advances in Colloid and Interface Science, Vol. 176-177, pp. 1-17.

41. Li X., Karakashev, S.I., Evans, G.M., and Stevenson, P., **2012**, "The Effect of the Environmental Humidity on the Static Foam Stability", Langmuir, Vol. 28 (9), pp.4060-4068.

42. Karakashev, S. I., and Ivanova, D. S., **2011**, "Dynamics of Thin Films with Different Radii", Annuare of Sofia University, Vol.102/103, pp.103-121**.**

43. Karakashev, S.I., Manev, E.D. and Nguyen, A.V., **2011**, "Effect of Thin Film elasticity on Foam stability", Annuare of Sofia University, Vol. 102/103, pp.153-163.

44. Vilkova, N.G., Elaneva, S.I., Kruglyakov, P.M., Karakashev, S.I., **2011**, "Foam Films from Hexylamine Stabilized by Silica Particles", Mendeleev Communications, Vol. 21, pp. 344-345.

45. Karakashev, S.I., Stöckelhuber, K.W., and Tsekov, R., **2011**, "Wetting Films on Chemically Patterned Surfaces", Journal of Colloid and Interface Science, Vol. 363, pp.663-667.

46. Ivanov, I.B., Slavchov, R.I., Basheva, E.S., Sidzhakova, D., and Karakashev, S.I., **2011**, "Hofmeister Effect on Micellization, Thin Films and Emulsion Stability", Advances in Colloid and Interface Science, Vol. 168, pp.93-104.

47. Karakashev, S.I., Grozev, N., Díez, I., Ras, R.H.A., and Tsekov, R., **2011**, "Rheology of Silver Nanocluster Solutions under Confinement", Colloids and Surfaces A, Vol. 374, pp. 570-573.

48. Ozdemir, O., Du, H., Karakashev, S.I., Nguyen, A.V., M.S. Celik, and Miller, J.D., **2011**, „Understanding the role of ion interactions in soluble salt flotation with alkylammonium and alkylsulfate collectors", Advances in Colloid and Interface Science, Vol. 163, pp. 1-22**.**

49. Ivanova, D.S., Angarska, Zh. K., Karakashev, S.I., and Manev, E.D., **2011**, "Drainage of foam films stabilized by *n*-dodecyl-β-D-maltoside or dodecyl trimethylammonium bromide and their mixtures", Colloids and Surfaces A, Vol. 382, pp. 93-101**.**

50. Karakashev, S.I., and Tsekov, R., **2011**, "Electro-Marangoni Effect in Thin Liquid Films", Langmuir, Vol. 27 (6), pp. 2265-2270.

51. Karakashev, S.I., Ivanova, D.S., Manev, E.D., Dimitrova, R.K., and Tsekov, R., **2011**, "An Experimental Test on the Fractal Model for Drainage of Foam Films**",** Journal of Colloid and Interface Science, Vol. 353**,** pp. 206-209.

52. Karakashev, S.I., Ozdemir, O., Hampton, M.A., and Nguyen, A.V., **2011**, "Formation and Stability of Foams stabilized by fine particles with similar size, contact angle and different shapes", Colloids and Surfaces A, Vol. 382, pp.132-138**.**

53. Karakashev, S.I., Tsekov, R., Manev, E.D., and Nguyen, A.V., **2010**, "Soap bubble Elasticity: Analysis and Correlation with Foam Stability", Plovdiv University "Paisii Hilendarski" – Bulgaria, Scientific Papers, Vol. 37, Book 5, 2010 – Chemistry, pp. 109-117.

54. Karakashev, S.I., **2010**, "Dynamics of expanding foam films under additionally applied pressure", Colloids and Surfaces A, Vol. 372 (1-3), pp. 151-154.

55. Karakashev, S.I., Tsekov, R., Manev, E.D., and Nguyen, A.V., **2010**, "Elasticity of Foam Bubbles measured with Profile Analysis Tensiometry", Colloids and Surfaces A, Vol. 369, pp.136-140**.**

56. Karakashev, S.I., Tsekov, R., and Ivanova, D.S., **2010**, "Dynamic effects in Thin Liquid Films Containing Ionic Surfactants", Colloids and Surfaces A, Vol. 356 (1-3), pp.40-45.

57. Karakashev, S.I., Ivanova, D.S., Angarska, Zh. K., Manev, E.D., Tsekov, R., Radoev, B., Slavchov, R., and Nguyen, A.V., **2010**, "Comparative Validation of the Analytical Models for the Marangoni Effect on Foam Film Drainage", Colloids and Surfaces A, Vol. 365 (1-3), pp. 122-136.

58. Karakashev, S.I. and Ivanova, D.S., **2010**, "Thin Liquid Film Drainage: Ionic vs. Non-Ionic Surfactants", Journal of Colloid and Interface Science, Vol. 343 (2), pp. 584-593.

59. Tsekov, R., Ivanova, D.S., Slavchov, R., Radoev, B., Manev, E.D., Nguyen, A.V. and Karakashev, S.I., **2010**, "Streaming Potential Effect on the Drainage of Thin Liquid Films Stabilized by Ionic Surfactants", Langmuir, Vol. 26 (7), pp. 4703-4708.

60. Kruglyakov, P.M., Elaneva, S.I., Vilkova, N.G., and Karakashev, S.I., **2010**, "Investigation of Foam Drainage Using Foam Drainage Pressure Drop Technique", Colloids and Surfaces, A, Vol. 354 (1-3), pp. 291-297.

61. Qu, X., Wang, L., Karakashev, S.I., and Nguyen, A.V., **2009**, "Anomalous Thickness Variation of the Foam Films Stabilized by Weak Nonionic Surfactants", Journal of Colloid and Interface Science, Vol. 337, pp. 538-547.

62. Henry, C. L., Karakashev, S.I., Nguyen, Ph. T., Nguyen, A.V., and Craig, V. S. J., **2009**, "Ion Specific Effects on Thin Film Drainage, Rupture and Lifetime in Nonaqueous Solvents Propylene Carbonate and Formamide", Langmuir, Vol. 25(17), pp.9931-9937.

63. Donose, B.C., Taran, E., Hampton, M.A., Karakashev, S.I., and Nguyen, A.V., **2009**, "Carbon Nanotube Air-Bubble Interactions Studied by Atomic Force Microscopy", Advanced Powder Technology, Vol. 20, pp. 257-261.

64. Karakashev, S.I. and Nguyen, A.V., **2009**, "Do Liquid Films Rupture due to the So-called Hydrophobic Force or Migration of Dissolved Gases?" Langmuir, Vol. 25 (6), pp. 3363-3368.

65. Ozdemir, O., Karakashev, S.I., Nguyen, A.V., and Miller, J.D., **2009**, "Adsorption and Surface Tension Analysis of Concentrated Alkali Halide Brine Solutions", Minerals Engineering, Vol. 22 (3), pp. 263-271.

66. Ozdemir, O., Taran, E., Hampton, M., Karakashev, S. I. and Nguyen, A.V., **2009**, "Surface Chemistry Aspects of Coal Flotation in Bore Water", International Journal of Mineral Processing, Vol. 77, pp. 177-183.

67. Malcolm, A.S., Dexter, A.F., Katakdhond, J.A., Karakashev, S.I., Nguyen, A.V. and Middelberg, A.P.J., **2009**, "Tuneable Control of Interfacial Wrinkling and Emulsion Coalescence", ChemPhysChem, Vol. 10 (5), pp.778-781.

68. Karakashev, S.I. and Nguyen, A.V., **2009**, "Meniscus Deformation and Dynamics of Moving Contact Line between Polyethylene Terephthalate Surface and Glycerol-Water Mixtures", Asian-Pacific Journal of Chemical Engineering, Vol. 4 (2), 204-210.

69. Karakashev, S.I. and Nguyen, A.V., **2009**, "The Importance of Aspect Ratio in Profile Analysis Tensiometry", Journal of Colloid and Interface Science, Vol. 330 (2), pp. 501-504.

70. Karakashev, S.I., Nguyen, Ph.T., Tsekov, R., Hampton, M., and Nguyen, A.V., **2008**, "Anomalous Ion Effects on Rupture and Lifetime of Aqueous Foam Films Formed from Monovalent Salt Solutions up to Saturation Concentration", Langmuir, Vol. 24 (20), pp.11587-11591.

71. Karakashev, S.I. and Nguyen, A.V., **2008**, "Effect of Hydrodynamics, Interface Capillarity and Molecular Kinetics on the Wetting a De-wetting on Wire Surfaces", Asian Pacific Journal of Chemical Engineering, Vol. 3 (1), pp. 30-35.

72. Kruglyakov, P.M., Karakashev, S.I., Nguyen, A.V., Vilkova, N.G., **2008**, "Foam Drainage" Current Opinion in Colloid and Interface Science, Vol. 13, pp. 163-170.

73. Karakashev, S.I., Manev, E.D., and Nguyen A.V., **2008**, "Effect of Double-Layer Repulsion on Foam Film Drainage", Colloids and Surfaces A, Vol. 319, pp. 34-42.

74. Manev, E.D., Sazdanova, S.V., Tsekov, R., Karakashev, S.I. and Nguyen, A.V. **2008**, "Adsorption of ionic surfactants", Colloids and Surfaces A, Vol. 319, pp. 29-33.

75. Karakashev, S.I., Manev, E.D., Tsekov, R. and Nguyen, A.V., **2008**, "Effect of Ionic Surfactants on Drainage and Equilibrium Thickness of Emulsion Films" Journal of Colloid and Interface Science, Vol. 318, pp.358-364.

76. Karakashev, S.I. and Nguyen, A.V., **2007**, "Effect of sodium dodecyl sulphate and Dodecanol mixtures on foam film drainage: Examining influence of surface rheology and intermolecular forces" Colloids and Surfaces A, Vol. 293 (1-3), pp.229-240.

77. Karakashev, S.I., Nguyen, A.V., and Manev, E. D., **2007**, "A novel technique for improving interferometric determination of emulsion film thickness by digital filtration" Journal of Colloid and Interface Science, - Vol. 306 (2), pp. 449-453.

78. Ozdemir, O., Karakashev, S.I., Nguyen, A.V. and Miller, J.D., **2006**, "Adsorption of carbonate and bicarbonate onto the gas-liquid interface from their brine solutions" International Journal of Mineral Processing – Vol. 81, pp. 149-158.

79. Phyanalinmat, S. and Karakashev, S.I., **2006**, "The spreading of fire fighting foams in the confined chambers by digital image visualization ", ChiangMai University Journal of Science – Vol. 33 (3), pp. 283-291

80. Karakashev, S.I., Phan, Ch. and Nguyen, A.V., **2005**, "Effect of sodium dodecylbenzene sulphonate on the motion of three-phase contact lines on the Wilhelmy plate surface", Journal of Colloid and Interface Science – Vol. 291, pp. 489-496.

81. Karakashev, S.I., Nguyen, A.V., Manev, E.D. and Phan, Ch., **2005**, "Surface foam film waves studied with high-speed linescan camera", Colloids and Surfaces, A – Vol. 262, pp. 23-32.

82. Karakashev, S.I., Manev, E.D. and Nguyen, A.V., **2004**, "Interpretation of negative values of the interaction parameter in the adsorption equation through the effects of surface layer heterogeneity", Advances in Colloid and Interface Science – Vol. 112, pp. 31-36.

83. Karakashev, S.I. and Manev, E.D., **2003**, "Correlation between the properties of foam films and the behaviour of foam body, prepared by mixture of non-ionic surfactants and organic or inorganic electrolytes" Journal of Colloid and Interface Science Vol. 259, pp. 171-179.

84. Karakashev, S.I. and Manev, E.D., **2002**, "Effect of Interactions between The Adsorbed Species on The Properties of Single and Mixed Surfactant Monolayers at Air/Water Interface" Journal of Colloid and Interface Science Vol. 248, p. 477-486.

85. Karakashev, S.I. and Manev, E.D., **2001**, "Frothing Behavior of Non-ionic Surfactant Solutions in The Presence of Organic and Inorganic Electrolytes" Journal of Colloid and Interface Science Vol. 235, pp. 194-196.

86. Karakashev, S.I., Tsekov, R. and Manev, E.D., **2001**, "Adsorption of ionic surfactants on air/water interface" Langmuir Vol. 17, pp. 5403-5405.

87. Karakashev, S.I., Manev, E.D., and Karakashev, G.I., **2001**, "Description of the adsorption behaviour of surfactant species on air/water interface" Bulgarian Chemical Communications Vol.34(1), pp. 32-49.

88. Manev, E.D., Karakashev, S.I. and Milushev, A.M., **2001**, "Influence of some organic and inorganic additivities on the stability of foams of tetraethilelene glycol mono octyl ether" Bulgarian Chemical Communications Vol. 33(2), pp. 133-147.

Referred Conference Proceedings

89. Karakashev, S.I., Ivanova, D.S., Angarska, Zh.K., and Manev, E.D., **2009**,"Dynamic Effects in Thin Liquid Films: Experiment versus theory", Scientific Research of the Union of Scientists Plovdiv, Series B. Natural Sciences and Humanities, Vol. XII, Plovdiv, 2009, pp.99-103.

90. Donose, B.C., Taran, E., Hampton, M.A., Karakashev, S.I. and Nguyen, A.V., **2008**, "Carbon Nano-tube Air-Bubble Interactions Studied by Atomic Force Microscopy", 36th Australasian Chemical Engineering Conference (Chemeca 2008), 28 September-1 October Newcastle, Australia.

91. Karakashev, S.I., Nguyen, A.V. and Evans G.M., **2007**, "Effect of surfactant adsorption and surface properties on emulsion film drainage" 35th Australasian Chemical Engineering Conference (Chemeca 2007), September 23-26, Melbourne, Australia.

92. Karakashev, S.I. and Nguyen, A.V., **2006**, "Effect of hydrodynamics, interface capillarity and molecular kinetics on the wetting and de-wetting on wire surfaces" 34th Australasian Chemical Engineering Conference (Chemeca 2006), September 17-20, Auckland, New Zealand.

93. Nguyen, A.V., Karakashev, S.I., and Jameson, G.J., **2006**, Effect of interfacial properties on water drainage and recovery in a froth column, XXIII International Mineral Processing Congress, September 03-08, Istanbul, Turkey.

94. Karakashev, S.I., Manev, E.D., and Nguyen, A.V., **2006**, "Effect of the Surface Forces on Thin Liquid Film Drainage." 20th Conference of the European Colloid and Interface Society, September 17-22, Budapest, Hungary.

95. Karakashev, S.I. and Manev, E.D., **2001**, "Theoretical analysis of the adsorption states of homologue series of nonionic surfactants on air/water interface", 4^{-th} National Conference in Chemistry, September 27-29, Sofia, Bulgaria.

Non-referred papers

96. Vilkova, N.G., Elaneva, S.I., Kruglyakov, P.M., Karakashev, S.I., **2012,** "Foam Films Stabilized by Solid Particles", Annuare of Shoumen University, in press.

97. Karakashev, S.I., Ozdemir, O., Hampton, M.A., Manev, E.D. and Nguyen, A.V., **2010** "Effect of Particles on Foam Stability", *Annual of Shoumen University,* Vol. XX B2, pp. 133-140.

98. Kruglyakov, P.M., Elaneva, S.I., Vilkova, N.G., and Karakashev, S.I., **2010**, "Foam Pressure Drop Technique in Studying Internal Foam Collapse", Annuare of Shoumen University, Vol. XXB2, pp. 204-213.

99. Tsekov, R., Ivanova, D. S., Slavchov, R., Radoev, B., Manev, E.D., Nguyen, A.V., and Karakashev, S.I., **2010**, "A New Model for the Kinetics of Drainage of Thin Liquid Films with Ionic Surfactants", Annuare of Shoumen University, Vol. XXB2, pp. 109-117.

100. Karakashev, S.I., **2009**, "Design of Foam and Froths with Entailed Durability", Parliament Magazine: Research Review, Vol. 11, p.17.

101. Karakashev, S.I. and Manev, E.D., **2002**, "Adsorption of ionic surfactants on air/water interface" Annuare of Shoumen University, Vol. Natural Sciences 2002, pp. 157-165.

102. Karakashev, S.I., Tsekov, R. and Manev, E.D., **2002**, "New model for description of the adsorption behaviour of ionic surfactants on air/water interface "Annuare of Shoumen University, Vol. Natural Sciences 2002, pp. 146-152.

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Courses taught:

1. Foams, antifoams and cleaning action;
2. Environment and dispersed systems;
3. Surfactants;
4. Exercises in physical chemistry and theory of experiment and statistics;
5. Physical Chemistry.

List of participation in conferences, workshops, forums…

1. Final conference of FineFuture project, 15 November, **2022**, Brussels, Belgium.
2. 20-th international workshop "Nanoscience and Nanotechnology" 8-10 November, **2018,** Sofia, Bulgaria.

3. Eufoam 2014, 7-10 July, **2014**, Thessaloniki, Greece.
4. Workshop "Materials for clean energy and optics", 4-7 April, **2013**, Pravets, Bulgaria.
5. Workshop "Materials for Environmental Protection", 22-25 June, **2013**, Varna, Bulgaria.
6. 41stAustralasian Chemical Engineering Conference (Chemeca 2013), **2013**, September 29-October 2, Brisbane, Australia.
7. National Conference with International Participation "40 years University of Shoumen", 12-14 September, **2011**, Shoumen, Bulgaria.
8. 9th International Frumkin Symposium: Electrochemical Technologies and Materials for 21st Century, 24-29 October, **2010** Moscow, Russia.
9. Eufoam 2010, **2010**, July 14-16, Borovets, Bulgaria.
10. SizeMat2, **2010**, September 19-21, Nesebar, Bulgaria.
11. 8 $^{-th}$ National Conference in Chemistry, 18-19 June, **2010,** Koprivshtitsa, Bulgaria.
12. 23^{-st} Conference of European Colloid and Interface Science (ECIS 2009), **2009**, September 6-11, Antalya, Turkey.
13. 3^{-th} International Conference of Young Scientists, **2009**, June 18-19, Plovdiv, Bulgaria.
14. Discussion Forum on "Roughness Aspects in Wetting and Adhesion", **2009**, March 30, Dresden, Germany.
15. BASE APEC Symposium on bio-based functional materials, **2008**, August 27-29, Brisbane, Australia.
16. 36th Australasian Chemical Engineering Conference (Chemeca 2008), **2008,** 28 September-1 October, Newcastle, Australia.
17. National Conference with International Participation (Natural Sciences), **2008,** September 26-27, Shumen, Bulgaria.
18. SME Annual Meeting, **2008**, February 24-27, Salt Lake City, Utah, USA.
19. 21^{-st} Conference of European Colloid and Interface Science (ECIS 2007), **2007**, September 10-14 Geneva, Switzerland.
20. 35th Australasian Chemical Engineering Conference (Chemeca 2007), **2007**, September, 23-26, Melbourne, Australia.
21. 20th Conference of the European Colloid and Interface Society, **2006**, September 17-22, Budapest, Hungary.
22. XXIII International Mineral Processing Congress, **2006**, September 03-08, Istanbul, Turkey.
23. 34thAustralasian Chemical Engineering Conference (Chemeca 2006), **2006**, September 17-20, Auckland, New Zealand.
24. The 225^{-th} ACS National Meetings, New Orleans, LA, USA, March 23-27, 2003.
25. Jubilee scientific session "30 years University of Shumen", **2001**, 30 October-1 November, Shumen, Bulgaria.

26. 4-th National Conference in Chemistry, **2001**, September 27-29, Sofia, Bulgaria.
27. 10-th International Conference on Colloid and Interface Science, **2000**, August 23-29, Bristol, UK.
28. Jubilee scientific session "110 years university education in chemistry", **1999**, October 23, Sofia, Bulgaria.

Professional and Scientific Awards and Recognitions

1. Top reviewer in Publon's Global Peer Review awards for 2018.
2. Fulbright award consolidated with the University of Ilionis at Chicago.
3. Outstanding reviewer of Advances in Colloid and Interface Science.
4. DAAD award consolidated with Dresden Institute of Polymer research.
5. Evrika Foundation Award for young scientist.
6. Recipient of an Early Career Researcher bursary from the organizing committee of the International Association of Colloid and Interface Scientists to attend to conference.

Career highlights

1. Reviewer of Tenside Surfactant and Detergents, Journal of Surfactant and Detergents, Colloids and Surfaces A, Journal of Colloid and Interface Science, Soft Matter, RSC Advances, Langmuir, International Journal of Engineering and Technology Innovation, Minerals Engineering, Biotechnology Progress, American Journal of Physical Chemistry, American Journal of Chemical Engineering, and Surface Innovations, and Advances in Colloid and Interface Science

2. Member of the editorial board of "Frontiers of Soft Matter - Foams" of Frontiers and "Coatings" of MDPI

Grants

1. 2022, project No КП – 06 – Н 69/4, National Science Fund, Surface-modified nanoparticles as carriers of proapoptotic protein and anticancer chemotherapeutic for selective uptake and intracellular release in cancer cells.

2. 2015, Sofia University Science Fund, Grant No 162, "Adsoprtion of H^+ ions on air/water interface and dependence of the surface electrostatic potential of the electrolyte solutions on pH and the ionic strength.
3. 2011, Sofia University Science Fund, Grant No 178, "Nano-fluidics of Thin Liquid Films on Chemically and Morphologically Modified Surfaces"

4. 2010, National Science Fund Grant DDVU 02/54, “Ion-Specific Effects on Surfactants, Proteins, and Foams and Emulsion Stability”.
5. 2010, DAAD grant in consolidation with Leibnitz Institute of Polymer research.
6. 2008, Marie Curie International Reintegration Grant MIRG-CT-2008-230626 “Design of froths and foams with entailed durability”.
7. 2007, Marie Curie International Reintegration Grant MIRG-CT-2007-200688 “Dynamic effects in thin liquid films”.
8. 2006, The University of Newcastle, FEBE Incentive Grant for Discovery Project, Account No.: P510-0047.
9. 2006, The University of Newcastle, IIP Grant for the project “Influence of surfactant adsorption on foam stability”.

Participation in other projects

1. 2019, ERC grant 821265 — FineFuture „Innovative technologies and concepts for fine particle flotation: unlocking future fine-grained deposits and Critical Raw Materials resources for the EU”.
2. 2010, National Science Fund Grant DDVU 02/12, “Electrical and Electro-chemical properties of liquid surfaces”.
3. 2010, National Science Fund DRG 02/3, “Nano-Fluidic Dynamics of Quantum-Dot Suspensions in Chemically-Modified Channels”.

Present and Ex-membership in Scientific and/or Professional Institutions, Bodies, and Organizations:

1. American Chemical Society;
2. American Nano-Society;
3. European Colloid and Interface Society;
4. Royal Society of Chemistry.