

## Publications

Prof. Dr. Rumen Krastev

### 2018

Hybrid graphene oxide/polysaccharide nanocomposites with controllable surface properties and biocompatibility

T. D. Andreeva, S. Stoichev, S. G. Taneva, R. Krastev *Carbohydrate Polymers* **181** (2018) 78–85

Controlled heparinase-catalyzed degradation of polyelectrolyte multilayer capsules with heparin as responsive layer

Lili Sun, Xin Xiong, Qiaogen Zou, Pingkai Ouyang, Rumen Krastev *Journal of Applied Polymer Science* 134(23) (2017)

Biofunctionalization of surfaces using polyelectrolyte multilayers

Hanna Hartmann, Rumen Krastev *BioNanoMaterials* 18 (1-2) (2017)

Regulation of the growth, morphology, mechanical properties and biocompatibility of natural polysaccharide-based multilayers by Hofmeister anions

T. Andreeva, H. Hartmann, S. Taneva, R. Krastev *J. Materials Chemistry B* (2016) eingereicht

Design of intelligent chitosan/heparin hollow microcapsules for drug delivery

L. Sun, X. Xiong, Q. Zou, P. Ouyang, C. Burkhardt, R. Krastev *J. Applied Polymer Sci. ASAP* (2016)

Drug release from liposome coated hydrogels for soft contact lenses: the blinking and temperature effect

P. Paradiso, R. Colaço, J.L.G. Mata, R. Krastev, B. Saramago, A.P. Serro *Journal of Biomedical Materials Research: Part B - Applied Biomaterials ASAP* (2016)

The Hofmeister anion effect on morphology of polyelectrolyte multilayers for biofunctionalization of cardiovascular stents

T. D. Andreeva, A. K. Danailova, P. Terziyska, S. B. Krumova, S. G. Taneva, R. Krastev *Bulgarian Chemical Communications* 48 (2016) 23 – 28

Fine-tuned PEGylation of chitosan to maintain optimal siRNA-nanoplex bioactivity

A. Guţoaia, L. Schuster, S. Margutti, S. Laufer, B. Schlosshauer, R. Krastev, D. Stoll, H. Hartmann *Carbohydrate Polymers* 143 (2016) 25 - 34

### 2015

Reflectometry on curved interfaces

J. Früh, A. Rühm, H.Möhwald, R. Krastev, R. Köhler *Physica B* 457 (2015) 202–211

Foam Stabilized by Fly Ash Nanoparticles for Enhancing Oil Recovery

A. Eftekhari, R. Krastev, and R. Farajzadeh *Industrial & Engineering Chemical Research* 54 (2015) 12482–12491

Interactions in lipid stabilised foam films

J. L. Toca-Herrera, N. Krasteva, H.-J. Müller, R. Krastev *Adv.Coll. Interf. Sci.* 207 (2014) 93-106

Surface relaxations as a tool to distinguish the dynamic interfacial properties of films formed by normal and diseased meibomian lipids  
G. As. Georgiev, N. Yokoi, S. Ivanova, V. Tonchev, Y. Nencheva and R. Krastev *Soft Matter* 10 (2014) 5579-5588

Neutron reflectometry on samples with curved geometry  
J. Früh, A. Rühm, H. Möhwald, R. Krastev, R. Köhler Joint Annual Report 2014 of the MLZ and FRM II

Polyelectrolyte Multilayers as Functional Coatings for Controlled Biomolecular Interactions  
X. Xiong, S. Hossfeld, S. Margutti and R. Krastev In: *Biofunctional Surface Engineering* (Martin Scholz Ed.) Pan Stanford Publishing; Auflage: 1, Chapter 4: (2014) p.47

Surface Chemistry Study of the Interaction of Hyaluronic Acid and Benzalkonium Chloride with Meibomia and Corneal Cell Lipids  
G. A. Georgiev, N. Yokoi, S. Ivanova, T. Dimitrov, K. Andreev, R. Krastev and Z. Lalchev *Soft Matter* 9 (2013) 10841-10856

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H. Hartmann, S. Hossfeld, B. Schlosshauer, U. Mitnacht, A. P. Pêgo, M. Daune, M. Dose, D. Stoll, R. Krastev *J. Controlled Release* 168 (3) (2013) 289–297

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Effect of Linear Elongation of PDMS-Supported Polyelectrolyte Multilayer Determined by Attenuated Total Reflectance IR Radiation  
J. Frueh, G. Reiter, J. Keller, H. Möwald, Qiang He and R. Krastev *J. Phys. Chem. B* 117(10) (2013) 2918-2925

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A. Nolte, S. Hossfeld, B. Schroepfel, A. Müller, D. Stoll, T. Walker, H.-P. Wendel, R. Krastev *J. of Biomaterials Applications* 28(1) (2013) 84-99

Polyelectrolyte Coatings for surface Modification  
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Foam–oil interaction in porous media: Implications for foam assisted enhanced oil recovery  
R. Farajzadeh, A. Andrianov, R. Krastev, G.J. Hirasaki, W.R. Rossen *Advances in Colloid and Interface Science* 183–184 (2012) 1–13

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RM Ramanathan, H.-J. Müller, H. Möhwald, and R. Krastev *ACS Appl. Mater. Interfaces* 3 (2011) 633-637

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Thermodynamic studies on thin liquid films IV. Foam film stabilized by sodium dodecyl sulfate

H. Iyota, N. Ikeda, R. Krastev J. Colloid and Interface Science 364 (1) (2011) 170-177

## 2010

Basic properties of foam films stabilized with tetraethylammonium salt of perfluoro octane sulphonate (PFOS)

RM. Muruganathan, H.–J. Müller, K. Vedula, H. Möhwald, R. Krastev Coll. Surf. A: Physicochemical and Engineering Aspects 354 (2010) 1 – 7

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N. Krasteva, H. Möhwald, R. Krastev C. R. Chimie 12 (2009) 129-137

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M. Kolasinska, R. Krastev, T. Gutberlet, P. Warszynski Langmuir 25 (2009) 1224-1232

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H. Iyota, R. Krastev Coll. Polym. Sci. 287 (2009) 425 - 433.

Gas Permeability of Foam Films Stabilized by an  $\alpha$ -Olefin Sulfonate Surfactant

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M. Elzbieciak, S. Zapotoczny, P. Nowak, R. Krastev, M. Nowakowska, and P. Warszyński  
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The formation of lipid bilayers on surfaces  
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M. Dittrich, B. Havertz und Dr. R. Krastev Pharmazeutische Zeitung (PZ) 4 (2009) 86.

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R. Farajzadeh, R. Krastev and P. L.J. Zitha Colloids and Surfaces A: Physicochem. Eng.  
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M. Kolasinska, R. Krastev, T. Gutberlet, P. Warszyński Progress in Colloid and Polymer  
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M. Krasowska, R. Krastev, M. Rogalski, and K. Malysa Langmuir 23 (2007) 549-557

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Mihaela Delcea, Rumen Krastev, Thomas Gutlebert, Dietmar Pum, Uwe B. Sleytr and José L. Toca-Herrera Journal of Nanoscience and Nanotechnology 7(12) (2007) 4260-4266

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