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## Publications

### **Microstructural changes in acid milk gels due to temperature-controlled high-intensity ultrasound treatment: Quantification by analysis of super-resolution microscopy images**

James Glover, Z., Gregersen, S. B., Wiking, L., Hammershøj, M. & Simonsen, A. C., 8. Dec 2021, (E-pub ahead of print)  
In: International Journal of Dairy Technology.

### **Human myelin protein P2: from crystallography to time-lapse membrane imaging and neuropathy-associated variants**

Uusitalo, M., Klenow, M. B., Laulumaa, S., Blakeley, M. P., Simonsen, A. C., Ruskamo, S. & Kursula, P., Dec 2021, In: The FEBS Journal. 288, 23, p. 6716-6735

### **Simultaneous membrane binding of Annexin A4 and A5 suppresses 2D lattice formation while maintaining curvature induction**

Mularski, A., Sønder, S. L., Heitmann, A. S. B., Nylandsted, J. & Simonsen, A. C., 15. Oct 2021, In: Journal of Colloid and Interface Science. 600, p. 854-864

### **Efficient chemical hydrophobization of lactic acid bacteria – One-step formation of double emulsion**

Jiang, X., Shekarforoush, E., Muhammed, M. K., Whitehead, K., Simonsen, A. C., Arneborg, N. & Risbo, J., Sep 2021, In: Food Research International. 147, 12 p., 110460.

### **Phenothiazines alter plasma membrane properties and sensitize cancer cells to injury by inhibiting annexin-mediated repair**

Heitmann, A. S. B., Zanjani, A. A. H., Klenow, M. B., Mularski, A., Sønder, S. L., Lund, F. W., Boye, T. L., Dias, C., Bendix, P. M., Simonsen, A. C., Khandelia, H. & Nylandsted, J., Aug 2021, In: Journal of Biological Chemistry. 297, 2, 101012.

### **Restructuring of the plasma membrane upon damage by LC3-associated macropinocytosis**

Sønder, S. L., Häger, S. C., Heitmann, A. S. B., Frankel, L. B., Dias, C., Simonsen, A. C. & Nylandsted, J., Jun 2021, In: Science Advances. 7, 27, 16 p., eabg1969.

### **Annexins A1 and A2 Accumulate and Are Immobilized at Cross-Linked Membrane-Membrane Interfaces**

Berg Klenow, M., Iversen, C., Wendelboe Lund, F., Mularski, A., Busk Heitmann, A. S., Dias, C., Nylandsted, J. & Simonsen, A. C., 27. Apr 2021, In: Biochemistry. 60, 16, p. 1248-1259

### **Interaction between added whey protein ingredients and native milk components in non-fat acidified model systems**

Li, R., Rovers, T. A. M., Jæger, T. C., Wijaya, W., Hougaard, A. B., Simonsen, A. C., Svensson, B. & Ipsen, R., Apr 2021, In: International Dairy Journal. 115, 11 p., 104946.

### **Microstructure and rheology of acid milk gels and stirred yoghurts –quantification of process-induced changes by auto- and cross correlation image analysis**

Gregersen, S. B., Glover, Z. J., Wiking, L., Simonsen, A. C., Bertelsen, K., Pedersen, B., Poulsen, K. R., Andersen, U. & Hammershøj, M., Feb 2021, In: Food Hydrocolloids. 111, 7 p., 106269.

**Timescale of hole closure during plasma membrane repair estimated by calcium imaging and numerical modeling**  
Klenow, M. B., Heitmann, A. S. B., Nylandsted, J. & Simonsen, A. C., Feb 2021, In: Scientific Reports. 11, 12 p., 4226.

**Effect of thawing procedures on the properties of frozen and subsequently thawed casein concentrate**  
Li, R., Rovers, T. A. M., Jæger, T. C., Hougaard, A. B., Svensson, B., Simonsen, A. C. & Ipsen, R., Jan 2021, In: International Dairy Journal. 112, 104860.

**Photophysical and Structural Characterization of Intrinsically Fluorescent Sterol Aggregates**  
Reinholdt, P., Joensen, L. E., Petersen, D., Szomek, M., Mularski, A., Simonsen, A. C., Kongsted, J. & Wüstner, D., 2021, In: Journal of Physical Chemistry B. 125, 22, p. 5838–5852

**Acoustic attenuation spectroscopy and helium ion microscopy study of rehydration of dairy powder**  
Glover, Z., Francis, M. J., Fiutowski, J., Sun, Q., Yu, Q., Andersen, U., Brewer, J. R., Simonsen, A. C., Povey, M. J. & Holmes, M. J., 6. May 2020, In: Colloids and Surfaces A: Physicochemical and Engineering Aspects. 600, 10 p., 124795.

**Interdisciplinary Synergy to Reveal Mechanisms of Annexin-Mediated Plasma Membrane Shaping and Repair**  
Bendix, P. M., Simonsen, A. C., Florentsen, C. D., Häger, S. C., Mularski, A., Zanjani, A. A. H., Moreno-Pescador, G., Klenow, M. B., Sønder, S. L., Danielsen, H. M., Arastoo, M. R., Heitmann, A. S., Pandey, M. P., Lund, F. W., Dias, C., Khandelia, H. & Nylandsted, J., 21. Apr 2020, In: Cells. 9, 4, 12 p., 1029.

**Dynamic moisture loss explored through quantitative super-resolution microscopy, spatial micro-viscosity and macroscopic analyses in acid milk gels**  
Glover, Z. J., Francis, M. J., Bisgaard, A. H., Andersen, U., Johansen, L. B., Povey, M. J., Holmes, M. J., Brewer, J. R. & Simonsen, A. C., Apr 2020, In: Food Hydrocolloids. 101, 105501.

**Annexins Bend Wound Edges during Plasma Membrane Repair**  
Simonsen, A. C., Boye, T. L. & Nylandsted, J., 2020, In: Current Medicinal Chemistry. 27, 22, p. 3600-3610

**Membrane rolling induced by bacterial toxins**  
Klenow, M. B., Jeppesen, J. C. & Simonsen, A. C., 2020, In: Soft Matter. 16, 6, p. 1614-1626

**Annexin A7 is required for ESCRT III-mediated plasma membrane repair**  
Sønder, S. L., Boye, T. L., Tölle, R., Dengjel, J., Maeda, K., Jäättelä, M., Simonsen, A. C., Jaiswal, J. K. & Nylandsted, J., 1. Dec 2019, In: Scientific Reports. 9, 1, 6726.

**Cross-correlation analysis to quantify relative spatial distributions of fat and protein in super-resolution microscopy images of dairy gels**  
Glover, Z. J., Bisgaard, A. H., Andersen, U., Povey, M. J., Brewer, J. R. & Simonsen, A. C., Dec 2019, In: Food Hydrocolloids. 97, 11 p., 105225.

**Super-resolution microscopy and empirically validated autocorrelation image analysis discriminates microstructures of dairy derived gels**  
Glover, Z. J., Ersch, C., Andersen, U., Holmes, M. J., Povey, M. J., Brewer, J. R. & Simonsen, A. C., 1. May 2019, In: Food Hydrocolloids. 90, p. 62-71

**Annexins induce curvature on free-edge membranes displaying distinct morphologies**  
Boye, T. L., Jeppesen, J. C., Maeda, K., Pezeshkian, W., Solovyeva, V., Nylandsted, J. & Simonsen, A. C., Jul 2018, In: Scientific Reports. 8, 14 p., 10309.

**Importance of Membrane Curvature Near Hole Edges in Plasma Membrane Repair**  
Boye, T. L., Pezeshkian, W., Simonsen, A. C. & Nylandsted, J., 2. Feb 2018, In: Biophysical Journal. 114, 3, Suppl. 1, p. 33A 1 p.

**Dye Giant Absorption and Light Confinement Effects in Porous Bragg Microcavities**  
Oliva-Ramírez, M., Gil-Rostra, J., Simonsen, A. C., Yubero, F. & González-Elipe, A. R., 2018, In: ACS Photonics. 5, 3, p. 984-991

**Kræftceller overlever ved at bøje celledmembranen**

Boye, T. L., Klenow, M. B., Nylandsted, J. & Simonsen, A. C., 2018, In: *Aktuel Naturvidenskab*. 6, 2018, p. 18-21

**Annexin A4 and A6 induce membrane curvature and constriction during cell membrane repair**

Boye, T. L., Maeda, K., Pezeshkian, W., Sønder, S. L., Haeger, S. C., Gerke, V., Simonsen, A. C. & Nylandsted, J., 2017, In: *Nature Communications*. 8, 1, 11 p., 1623.

**Contact angle goniometry on single micron-scale fibers for composites**

Hansen, D., Bomholt, N., Jeppesen, J. C. & Simonsen, A. C., 2017, In: *Applied Surface Science*. 392, p. 181–188

**Effect of homogenisation in formation of thermally induced aggregates in a non- and low- fat milk model system with microparticulated whey proteins**

Torres, I. C., Nieto, G., Nylander, T., Simonsen, A. C., Tolkach, A. & Ipsen, R., 2017, In: *Journal of Dairy Research*. 84, 2, p. 229-238

**Effects of seaweed sterols fucosterol and desmosterol on lipid membranes**

Mouritsen, O. G., Bagatolli, L. A., Duelund, L., Garvik, O., Ipsen, J. H. & Simonsen, A. C., 2017, In: *Chemistry and Physics of Lipids*. 205, p. 1-10

**Dielectric spectroscopy for evaluating dry matter content of potato tubers**

Nielsen, G. G. B., Kjaer, A., Klösgen, B., Hansen, P. L., Simonsen, A. C. & Jørgensen, B., 2016, In: *Journal of Food Engineering*. 189, p. 9-16

**Oriental texture of membranes: An overview**

Simonsen, A. C., 2016.

**Spatial distribution and activity of Na<sup>+</sup>/K<sup>+</sup>-ATPase in lipid bilayer membranes with phase boundaries**

Bhartia, T., Cornelius, F., Brewer, J. R., Bagatolli, L., Simonsen, A. C., Ipsen, J. H. & Mouritsen, O. G., 2016, In: *BBA Biomembranes*. 1858, 6, p. 1390-1399

**Roughness analysis of single nanoparticles applied to atomic force microscopy images of hydrated casein micelles**

Christensen, M., Rasmussen, J. T. & Simonsen, A. C., 2015, In: *Food Hydrocolloids*. 45, March, p. 168-174 7 p.

**Shiga toxin induces membrane reorganization and formation of long range lipid order**

Solovyeva, V., Johannes, L. & Simonsen, A. C., 2015, In: *Soft Matter*. 11, 1, p. 186-192

**Slow Relaxation of Shape and Orientational Texture in Membrane Gel Domains**

Jeppesen, J. C., Solovyeva, V., Brewer, J. R., Johannes, L., Hansen, P. L. & Simonsen, A. C., 2015, In: *Langmuir*. 31, 46, p. 12699–12707 9 p.

**Small Fluid Domains in Free-Standing Membranes Captured on a Solid Support**

Simonsen, A. C., 17. Jun 2014. 1 p.

**Fluid domain patterns in free-standing membranes captured on a solid support**

Bhartia, T., Husen, P. R., Ipsen, J. H., Bagatolli, L. & Simonsen, A. C., 2014, In: *B B A - Biomembranes*. 1838, 10, p. 2503-2510

**Polyaromatic hydrocarbons do not disturb liquid-liquid phase coexistence, but increase the fluidity of model membranes**

Liland, N. S., Simonsen, A. C., Duelund, L., Torstensen, B. E., Berntssen, M. H. G. & Mouritsen, O. G., 2014, In: *Chemistry and Physics of Lipids*. 184, p. 18-24 7 p.

### **Systematic Variation of Gel-Phase Texture in Phospholipid Membranes**

Dreier, J., Brewer, J. R. & Simonsen, A. C., 2014, In: Langmuir. 30 , p. 10678–10685

### **Compositional and structural characterization of monolayers and bilayers composed of native pulmonary surfactant from wild type mice**

Bernardino de la Serna, J., Hansen, S., Berzina, Z., Simonsen, A. C., Hannibal-Bach, H. K., Knudsen, J., Ejsing, C. S. & Bagatolli, L. A., Nov 2013, In: Biochimica et Biophysica Acta - Biomembranes. 1828, 11, p. 2450-2459 10 p.

### **Propofol modulates the lipid phase transition and localizes near the headgroup of membranes**

Hansen, A. H., Tølbøl Sørensen, K., Mathieu, R., Serer, A., Duelund, L., Khandelia, H., Hansen, P. L. & Simonsen, A. C., 3. Sep 2013, In: Chemistry and Physics of Lipids. 175-176, p. 84-91

### **Hydrophobic mismatch triggering texture defects in membrane gel domains**

Dreier, J., Brewer, J. R. & Simonsen, A. C., 2013, In: The Journal of Physical Chemistry Letters. 4, 17, p. 2789-2793

### **Imaging Ellipsometry of Spin-Coated Membranes: Mapping of Multilamellar Films, Hydrated Membranes, and Fluid Domains**

Nielsen, M. M. B. & Simonsen, A. C., 2013, In: Langmuir. 29, 5, p. 1525–1532

### **Imaging of few-layer graphene flakes**

Eriksen, R. L., Albrektsen, O., Novikov, S. M., Schall, D., Karl, M., Bozhevolnyi, S. I. & Simonsen, A. C., 25. Jun 2012. 1 p.

### **High resolution imaging of few-layer graphene**

Albrektsen, O., Eriksen, R. L., Novikov, S. M., Schall, D., Karl, M., Bozhevolnyi, S. I. & Simonsen, A. C., 2012, In: Journal of Applied Physics. 111, p. 064305 8 p.

### **High resolution microscopy of casein micelles and casein monolayers: Integration of complementary techniques**

Christensen, M., Trige Rasmussen, J. & Simonsen, A. C., 2012.

### **Nanostrukturer i mælk: Fundamentale undersøgelser af kaseiner og kaseinmiceller som genvej til at optimere og udvikle mejeriprodukter**

Christensen, M., Ipsen, R., Simonsen, A. C. & Rasmussen, J. T., 2012, In: Mælkeritidende. 12, p. 10-11 2 p.

### **Texture defects in lipid membrane domains**

Dreier, J., Brewer, J. R. & Simonsen, A. C., 2012, In: Soft Matter. 8, p. 4894–4904 11 p.

### **Stripe domains in membranes have a rippled substructure**

Jensen, U. B., Midtby, H., Ipsen, J. H. & Simonsen, A. C., Aug 2011.

### **Øvelsesvejledningen "Ideale Gasser": Vejledning til kurset FY520 Grundlæggende Fysikforståelse**

Simonsen, A. C., 1. Mar 2011

### **Correlation between the ripple phase and stripe domains in membranes**

Bernchou, U., Midtby, H., Ipsen, J. H. & Simonsen, A. C., 2011, In: B B A - Biomembranes. 1808, p. 2849–2858 9 p.

### **Hemispherical Shell Nanostructures from Metal-Stripped Embossed Alumina on Aluminum Templates**

Nielsen, P., Albrektsen, O., Simonsen, A. C. & Morgen, P., 2011, In: Journal of Physical Chemistry Part C: Nanomaterials and Interfaces. 115, 13, p. 5552-5560 9 p.

### **New insights into the mucoadhesion of pectins by AFM roughness parameters in combination with SPR**

Joergensen, L., Klösgen, B., Simonsen, A. C., Borch-Jensen, J. & Hagesæther, E., 2011, In: International Journal of Pharmaceutics. 411, 1-2, p. 162-168 7 p.

**Ultrathin Spin-Coated Dioleoylphosphatidylcholine Lipid Layers in Dry Conditions: A Combined Atomic Force Microscopy and Nanomechanical Study**

Dols-Perez, A., Fumagalli, L., Simonsen, A. C. & Gomila, G., 2011, In: Langmuir. 27 , p. 13165–13172 8 p.

**Characterization of stripped noble metal nanosphere shells**

Nielsen, P., Albrektsen, O., Simonsen, A. C. & Morgen, P., 10. Nov 2010.

**Øvelsesvejledningen "Brownsk Bevægelse": Vejledning til kurset FY520 Grundlæggende Fysikforståelse**

Simonsen, A. C., 1. Mar 2010

**Design Concepts For a Biocushion to Comfort Lipid Membranes**

Hermanowska, M. M., Gorska, A., Borch, J., Simonsen, A. C. & Klösgen-Buchkremer, B. M., Jan 2010, In: Biophysical Journal. 98, 3, suppl 1, p. 606a-607a

**An outlook on organization of lipids in membranes: Searching for a realistic connection with the organization of biological membranes**

Bagatolli, L., Ipsen, J. H., Simonsen, A. C. & Mouritsen, O. G., 2010, In: Progress in Lipid Research. 49, p. 378-389 10 p.

**Fabrication and Characterization of Gold Films Nano-Structured by a Method Forming Nano-Protrusions and the Inverse Nano-Indentations**

Eriksen, R. L., Albrektsen, O., Simonsen, A. C. & Pors, A., 2010. 1 p.

**Fabrication of large area homogeneous metallic nanostructures for optical sensing using colloidal lithography**

Eriksen, R. L., Pors, A., Dreier, J., Simonsen, A. C. & Albrektsen, O., 2010, In: Microelectronic Engineering. 87, 5-8, p. 1471–1474 4 p.

**Gold Films with Imprinted Cavities**

Dreier, J., Eriksen, R. L., Albrektsen, O., Pors, A. & Simonsen, A. C., 2010, In: Journal of Physical Chemistry Letters. 1, p. 260-264 5 p.

**Lipid composition can predict mice native pulmonary surfactant membranes. 2. Fluid phase coexistence in bilayers and monolayers**

Bernardino de la Serna, J., Hansen, S., Berzina, Z., Hannibal-Bach, H. K., Holmskov, U., Simonsen, A. C., Ejsing, C. S., Knudsen, J. & Bagatolli, L., 2010, In: Chemistry and Physics of Lipids. 163, p. S5-S5

**Native Pulmonary Surfactant Membranes in Mice Show Coexistence of Two Different Phases in Bilayers and Monolayers: When the Lipid Composition can Predict the Structural Phase Segregations**

Bernardino de la Serna, J., Hansen, S., Hannibal-Bach, H. K., Holmskov, U., Simonsen, A. C., Knudsen, J. & Bagatolli, L., 2010, In: Biophysical Journal. 98, 3, p. 287a

**Native Pulmonary Surfactant Membranes show similar phase segregation in bilayers and monolayers, both qualitatively and quantitatively, as predicted by lipid composition analysis**

Bernardino de la Serna, J., Hansen, S., Berzina, Z., Hannibal-Bach, H. K., Holmskov, U., Simonsen, A. C., Ejsing, C. S., Knudsen, J. & Bagatolli, L., 2010, In: Chemistry and Physics of Lipids. 163, p. S31-S31

**Texture of lipid bilayer domains**

Jensen, U. B., Brewer, J. R., Midtby, H. S., Ipsen, J. H., Bagatolli, L. & Simonsen, A. C., 14. Oct 2009, In: Journal of the American Chemical Society. 131, 40, p. 14130-14131

**DNA controlled assembly of liposomes**

Vogel, S., Jakobsen, U. & Simonsen, A. C., 8. Sep 2009, In: Nucleic Acids Symposium Series. 52, 1, p. 21-22 2 p.

**Segregated phases in pulmonary surfactant membranes do not show coexistence of lipid populations with differentiated dynamic properties**

Bernardino de la Serna, J., Orädd, G., Bagatolli, L., Simonsen, A. C., Marsh, D., Lindblom, G. & Perez-Gil, J., 2. Sep 2009, In: Biophysical Journal. 97, 5, p. 1381-9 9 p.

**Growth of solid domains in model membranes: quantitative image analysis reveals a strong correlation between domain shape and spatial position**

Bernchou, U., Ipsen, J. H. & Simonsen, A. C., 21. May 2009, In: Journal of Physical Chemistry B. 113, 20, p. 7170-7 7 p.

**Metal films with imprinted nanostructures by template stripping**

Eriksen, R. L., Pors, A., Dreier, J., Simonsen, A. C. & Albrektsen, O., 2009. 2 p.

**Biophysical, Structural and Compositional characterization at the molecular level of Native Pulmonary Surfactant Membranes directly isolated from mice Wild-type and Knocked-out Protein D Bronco-alveolar Lavage Fluid**

Bernardino de la Serna, J., Hansen, S., Hannibal-Bach, H. K., Simonsen, A. C., Knudsen, J. & Bagatolli, L., 2009, In: Biophysical Journal. 3, p. 451a

**Characterization of a New Biomimetic Multilayer System for Biomembrane Interaction Studies**

Hermanowska, M., Borch, J., Simonsen, A. C. & Klösgen-Buchkremer, B. M., 2009, In: Biophysical Journal. 96, 3, suppl 1, p. 452A

**Effects of seaweed sterols fucosterol and demosterol on lipid membranes**

Simonsen, A. C., Bagatolli, L., Duelund, L., Garvik, O. S., Ipsen, J. H. & Mouritsen, O. G., 2009, In: Biophysical Journal. p. 606a 1 p.

**Spatio-Temporal Organization of Spincoated Supported Model Membranes**

Simonsen, A. C., 2009, *Handbook of Modern Biophysics: BIOMEMBRANE FRONTIERS: NANOSTRUCTURES, MODELS AND THE DESIGN OF LIFE*. Springer, Vol. 2. p. 141-170 29 p. (Springer Series in Materials Science).

**The fluorescent cholesterol analog dehydroergosterol induces liquid-ordered domains in model membranes**

Garvik, O., Benediktson, P., Simonsen, A. C., Ipsen, J. H. & Wüstner, D., 2009, In: Chemistry and Physics of Lipids. 159, 2, p. 114-118 5 p.

**DNA controlled assembly of soft nanoparticles**

Vogel, S., Simonsen, A. C. & Jakobsen, U., 8. Sep 2008, In: Nucleic Acids Symposium Series. 52, 1, p. 225-226 2 p.

**Interactions between a Polystyrene Particle and Hydrophilic and Hydrophobic Surfaces in Aqueous Solutions**

Thormann, E., Simonsen, A. C., Hansen, P. L. & Mouritsen, O. G., 14. Jun 2008, In: Langmuir. 24, 14, p. 7278-7284 7 p.

**Activation of phospholipase A(2) by ternary model membranes**

Simonsen, A. C., 15. May 2008, In: Biophysical Journal. 94, 10, p. 3966-3975 10 p.

**Enkeltmolekyle-tagfat**

Mouritsen, O. G., Thormann, E. & Simonsen, A. C., 2008, In: *Aktuel Naturvidenskab*. 2, p. 11-15 5 p.

**DNA controlled assembly of lipid membranes**

Vogel, S. & Simonsen, A. C., 2008, Patent No. WO2008089771, 24. Jan 2008

**DNA-Controlled Assembly of Soft Nanoparticles**

Jakobsen, U., Simonsen, A. C. & Vogel, S., 2008, In: Journal of the American Chemical Society. 130, p. 10462-10463 2 p.

**Force trace hysteresis and temperature dependence of bridging nanobubble induced forces between hydrophobic surfaces**

Thormann, E., Simonsen, A. C., Hansen, P. L. & Mouritsen, O. G., 2008, In: ACS Nano. 2, 9, p. 1817-1824 8 p.

### **May the force be with you**

Thormann, E., Simonsen, A. C. & Mouritsen, O. G., 2008, In: LMFK-Bladet. 2, p. 42-46 5 p.

### **The membrane interface as a structured compartment and a substrate for enzyme action**

Mouritsen, O. G., Bagatolli, L. & Simonsen, A. C., 2008, *Structure and Dynamics of Membranous Interfaces*. nag, K. (ed.). Hoboken, NJ, USA: John Wiley & Sons Ltd, p. 3-17 15 p.

### **Assembly of artificial membranes**

Vogel, S., Jakobsen, U. & Simonsen, A. C., 2007. 1 p.

### **Domain Shapes, Coarsening, and Random Patterns in Ternary Membranes**

Herholdt Jensen, M., J. Morris, E. & Simonsen, A. C., 2007, In: Langmuir. 23, p. 8135-8141 6 p.

### **Dynamic Strength of the Interaction between Lung Surfactant Protein D (SP-D) and Saccharide Ligands**

Thormann, E., Kisbye Dreyer, J., Simonsen, A. C., Hansen, P. L., Hansen, S., Holmskov, U. & Mouritsen, O. G., 2007, In: Biochemistry. 46, p. 12231-12237 7 p.

### **Human stratum corneum lipid organization as observed by atomic force microscopy on Langmuir-Blodgett films**

Norlen, L., Plasencia, I., Simonsen, A. C. & Descouts, P., 2007, In: Journal of Structural Biology. 158, p. 386-400 15 p.

### **Ligand-receptor interactions and membrane structure investigated by AFM and time-resolved fluorescence microscopy**

Thormann, E., Simonsen, A. C., Kildemark Nielsen, L. & Mouritsen, O. G., 2007, In: Journal of Molecular Recognition. 20, p. 554-560 7 p.

### **Absence of fluid-ordered/fluid-disordered phase coexistence in ceramide/POPC mixtures containing cholesterol**

Fidorra, M., Duelund, L., Leidy, C., Simonsen, A. C. & Bagatolli, L., 2006, In: Biophysical Journal. 90, p. 4437-4451

### **Activation of interfacial enzymes at membrane surfaces**

Mouritsen, O. G., Andresen, T., Halperin, A., Hansen, P. L., Jakobsen, A. F., Jensen, U. B., Jensen, M. Ø., Jørgensen, K., Kaasgaard, T., Leidy, C., Simonsen, A. C., Peters, G. & Weiss, M., 2006, In: Journal of Physics: Condensed Matter. 18, p. S1293-S1304

### **Analysis of the dynamic shape evolution of a fluid membrane during hydrolysis by Phospholipase A2**

Simonsen, A. C., Jensen, U. B. & Hansen, P. L., 2006.

### **Characteristics of fibers formed by cytochrome c and induced by anionic phospholipids**

Alakoskela, J.-M., Jutila, A., Simonsen, A. C., Pirneskoski, J., Pyhäjoki, S.S., Turunen, R., Marttila, S., Mouritsen, O. G., Goormaghtigh, E. & Kinnunen, P. K. J., 2006, In: Biochemistry. 45, p. 13447-13453

### **Dynamic force spectroscopy on soft molecular systems: Improved analysis of unbinding spectra with varying linker compliance**

Thormann, E., Hansen, P. L., Simonsen, A. C. & Mouritsen, O. G., 2006, In: Colloids and Surfaces B: Biointerfaces. 53, p. 149-156

### **Forskerdysten,-24 timers konkurrence under Forskningens Døgn med opgaven at løse verdens energiproblemer**

Simonsen, A. C., 2006

### **Hydrolysis of fluid supported membrane islands by phospholipase A(2): Time-lapse imaging and kinetic analysis**

Simonsen, A. C., Jensen, U. B. & Hansen, P. L., 2006, In: Journal of Colloid and Interface Science. 301, p. 107-115

### **Nanofibers made to order: - free floating, transferred and gel-packed organic nanoaggregates**

Balzer, F., Bagatolli, L., Brewer, J. R., Simonsen, A. C. & Rubahn, H.-G., 2006.

**Formation of single supported bilayer membranes by spincoating: Structure and domain formation**

Simonsen, A. C. & Bagatolli, L., 2005, *ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY*. American Chemical Society, Vol. 229. p. U714

**Shape relaxations in a fluid supported membrane during hydrolysis by phospholipase A2**

Jensen, U. B. & Simonsen, A. C., 2005, In: *Biochimica et Biophysica Acta - Biomembranes*. 1715, p. 1-5

**UV laser cutting on organic nanofibers**

Balzer, B., Ihlemann, J., Simonsen, A. C. & Rubahn, H-G., 2005.

**Cholesterol rules: direct observation of the coexistence of two fluid phases in native pulmonary surfactant membranes at physiological temperatures**

Bernardino de la Serna, J., Perez-Gil, J., Simonsen, A. C. & Bagatolli, L. A., 24. Sep 2004, In: *Journal of Biological Chemistry*. 279, 39, p. 40715-40722 7 p.

**Coexistence of two fluid phases in native porcine pulmonary surfactant membranes: cholesterol rules**

Bagatolli, L., Bernardino de la Serna, J., Simonsen, A. C. & Perez-Gil, J., 2004.

**Lateral organization in native pulmonary surfactant films visualized by combined AFM and fluorescence imaging**

Simonsen, A. C., Bernardino de la Serna, J., Bagatolli, L. & Perez-Gil, J., 2004.

**Lateral phase separation in giant unilamellar vesicles made of native pulmonary surfactant preparations. Role of cholesterol and the hydrophobic proteins SP-B and SP-C**

Bernardino de la Serna, J., Simonsen, A. C., Perez-Gil, J. & Bagatolli, L., 2004, In: *Applied Cardiopulmonary Pathophysiology*. 13, 1, p. 16-18

**Nanobubbles give evidence of incomplete wetting at a hydrophobic interface.**

Simonsen, A. C., Hansen, P. L. & Klösgen, B., 2004, In: *Journal of Colloid and Interface Science*. 273, p. 291-299

**Organic Nanoaggregates: A Window to Submicron Optics**

Balzer, F., Bordo, V. G., Neuendorf, R., Al-Shamery, K., Simonsen, A. C. & Rubahn, H-G., 2004, In: *IEEE Transactions on Nanotechnology*. 3, 1, p. 67-72

**Structure of spincoated lipid films and domain formation in supported membranes formed by hydration.**

Simonsen, A. C. & Bagatolli, L., 2004, In: *Langmuir*. 20, p. 9720-9728

**UV laser-induced micron grating formation in PDMS thin films.**

Rubahn, K., Ihlemann, J., Jakopic, G., Simonsen, A. C. & Rubahn, H-G., 2004, In: *Applied Physics A: Materials Science & Processing*. 79, p. 1715-1719

**Videnskaben i øjet - et billede siger mere end tusind ord**

Mouritsen, O. G., Simonsen, A. C., Rowat, A. C., Bagatolli, L. & Keller, D., 2004, In: *Aktuel Naturvidenskab*. 4, p. 18-21 4 p.

**Atomic Force Microscopy of interface-associated nano-bubbles formed by hydrophobic mismatch**

Simonsen, A. C., Klösgen-Buchkremer, B. M. & Mouritsen, O. G., 2003, In: *Biophysical Journal*. 84, p. 469A-469A

**Electroformed liposomes on planar electrodes as free-standing model membranes for atomic force microscopy**

Simonsen, A. C., Bagatolli, L. & Mouritsen, O. G., 2003.

**Nanobubbles and their precursor layer at the interface of water against a hydrophobic substrate**

Steitz, R., Gutberlet, T., Hauss, T., Klösgen, B., Krastev, R., Schemmel, S., Simonsen, A. C. & Findenegg, G., 2003, In: *Langmuir*. 19, 6, p. 2409-2418



### **Optical Waveguiding in Individual Nanometer-Scale Organic Fibers**

Balzer, F., Bordo, V. G., Simonsen, A. C. & Rubahn, H-G., 2003, In: Physical Review B. 67, 11, p. 115408

### **Optically Active Organic Microrings**

Balzer, F., Beermann, J., Bozhevolnyi, S. I., Simonsen, A. C. & Rubahn, H-G., 2003, In: Nano Letters. 3, 9, p. 1311-1314

### **Optiske nano-fibre**

Rubahn, H-G. & Simonsen, A. C., 2003, In: Aktuel Naturvidenskab. 6, p. 16-19 4 p.

### **Local Spectroscopy of Individual Hexaphenyl Nanofibers**

Simonsen, A. C. & Rubahn, H-G., 2002, In: Nano Letters. 2, 12, p. 1379-82

### **Probing the ex situ morphology of Ge islands on Si(001): AFM and XPS inelastic peak shape analysis**

Simonsen, A. C., Tougaard, S., Lundsgaard Hansen, J. & Nylandsted Larsen, A., 2001, In: Surface and Interface Analysis. 31, 4, p. 328-337 10 p.

### **Analysis of angle-resolved electron energy loss in XPS spectra of Ag, Au, Co, Cu, Fe and Si**

Simonsen, A. C., Youbero, F. & Tougaard, S., 1999, In: Surface Science. 436, 1, p. 149-159

### **Nanostructure of Ge deposited on Si(001): a study by XPS peak shape analysis and AFM**

Simonsen, A. C., Schleberger, M., Tougaard, S., Lundsgaard Hansen, J. & Nylandsted Larsen, A., 1999, In: Thin Solid Films. 338, 1-2, p. 165-71 7 p.

### **Quantification of Au deposited on Ni: XPS peak shape analysis compared to RBS**

Simonsen, A. C., Pøhler, J. P., Jeynes, C. & Tougaard, S., 1999, In: Surface and Interface Analysis. 27, 1, p. 52-56 5 p.

### **Ge growth on Si(001) studied by x-ray photoelectron spectroscopy peakshape analysis and atomic force microscopy**

Schleberger, M., Simonsen, A. C., Tougaard, S., Lundsgaard Hansen, J. & Nylandsted Larsen, A., 1. Nov 1997, In: Journal of Vacuum Science & Technology. A. Vacuum, Surfaces, and Films. 15, 6, p. 3032-3035 4 p.

### **Quantitative model of electron energy loss in XPS**

Simonsen, A. C., Yubero, F. & Tougaard, S., 15. Jul 1997, In: Physical Review B. 56, 3, p. 1612-1619 8 p.

## **Activities**

### **Quantitative Analysis of Membrane Domain Patterns**

Adam Cohen Simonsen (Lecturer)

24. Mar 2009

### **"Texture in Biomembrane Domains": Combining microscopy and image analysis to probe the lipid orientation**

Adam Cohen Simonsen (Lecturer)

10. Nov 2010

### **1st In-House Conference on Imaging Ellipsometry and Brewster Angle Microscopy. Accurion GmbH**

Adam Cohen Simonsen (Participant)

9. Jun 2010 → 10. Jun 2010

### **6th workshop ellipsometry, TU Berlin**

Adam Cohen Simonsen (Speaker)

21. Feb 2011 → 23. Feb 2011

**AFM BioMed 2011**

Adam Cohen Simonsen (Participant)  
23. Aug 2011 → 27. Aug 2011

**AFM4NanoMed&Bio, EU COST ACTION TD1002 (External organisation)**

Adam Cohen Simonsen (Member)  
2011 → 2014

**Annexins induce membrane curvature near hole edges during plasma membrane repair**

Adam Cohen Simonsen (Guest lecturer)  
1. Apr 2019

**Atomic Force Microscopy (AFM): A powerful technique for characterizing biomolecular interfaces and single biomolecules**

Adam Cohen Simonsen (Lecturer)  
19. Oct 2011

**Atomic Force Microscopy: A powerful technique for characterizing biomolecular interfaces and single biomolecules**

Adam Cohen Simonsen (Lecturer)  
19. Oct 2011

**Biophysics and Milk: Applying high-resolution microscopy and concepts from biophysics to dairy systems**

Adam Cohen Simonsen (Lecturer)  
26. May 2014

**Brunch med en forsker: Foredrag på hyttetur for nye studerende på SDU**

Adam Cohen Simonsen (Other)  
6. Sep 2008

**Censor på 1 speciale + 2 gruppeeksamener, Aalborg Universitet**

Adam Cohen Simonsen (Censor)  
23. Jun 2010

**Censor på 1 speciale, Aarhus Universitet**

Adam Cohen Simonsen (Censor)  
7. Jan 2011

**Censor på 1 speciale, Aarhus Universitet**

Adam Cohen Simonsen (Censor)  
4. Feb 2011

**Censor på 1 speciale, Århus Universitet**

Adam Cohen Simonsen (Censor)  
25. Jan 2012

**Censor på 1 speciale, DTU**

Adam Cohen Simonsen (Censor)  
10. Sep 2010

**Censor på 1 speciale, Niels Bohr Institutet**

Adam Cohen Simonsen (Censor)  
25. Jun 2012

**Censor på speciale, NBI/KU**

Adam Cohen Simonsen (Censor)  
8. Aug 2011

**Censor ved førsteårsprojekter**

Adam Cohen Simonsen (Censor)  
14. Jun 2007

**Chalmers University of Technology (External organisation)**

Adam Cohen Simonsen (Member)  
22. Feb 2013

**Characterization of Domain Patterns in Biomembranes**

Adam Cohen Simonsen (Lecturer)  
18. Dec 2008

**DIBS17**

Adam Cohen Simonsen (Organizer)  
23. Jan 2017

**Domain structures in model membranes**

Adam Cohen Simonsen (Lecturer)  
6. Mar 2007

**Ekstern oponent på PhD afhandling, Nanoscience Center KU og DTU**

Adam Cohen Simonsen (Examiner)  
16. Sep 2011

**European Neuropsychopharmacology (Journal)**

Adam Cohen Simonsen (Editor)  
1. Jan 2009

**European Physics Journal E (Journal)**

Adam Cohen Simonsen (Editor)  
1. Jan 2009

**Foam in Food**

Adam Cohen Simonsen (Participant)  
19. Apr 2012

**Food in Front - LMC Congress 2011**

Adam Cohen Simonsen (Participant)  
23. May 2011 → 24. May 2011

**Forskningsbaseret innovation i fødevarebranchen**

Adam Cohen Simonsen (Participant)  
30. Oct 2013

**Fysik: Alt hvad du bør vide om naturvidenskab – næsten**

Adam Cohen Simonsen (Lecturer)  
7. Nov 2012

**Gordon Research Conference**

Adam Cohen Simonsen (Participant)  
15. Jun 2014 → 20. Jun 2014

**High resolution imaging og biomolecular structures by Atomic Force Microscopy**

Adam Cohen Simonsen (Lecturer)

10. Nov 2008

**High resolution microscopy of structure formation in supported lipid membranes**

Adam Cohen Simonsen (Speaker)

2006

**Hovedopponent ved PhD forsvar, KTH Stockholm (External organisation)**

Adam Cohen Simonsen (Chairman)

2. Nov 2012

**ILCC2012**

Adam Cohen Simonsen (Speaker)

23. Aug 2012

**Importance of membrane curvature near hole edges in plasma membrane repair**

Adam Cohen Simonsen (Guest lecturer)

18. Feb 2018

**Journal of the American Chemical Society (Journal)**

Adam Cohen Simonsen (Editor)

1. Jan 2009

**Jury medlem i "Projekt forskerspire" (External organisation)**

Adam Cohen Simonsen (Member)

1. Oct 2011 → 8. Dec 2011

**Kaseinmicellens struktur og anvendelse af specifikke kaseiner som funktionel ingrediens**

Adam Cohen Simonsen (Lecturer)

15. Mar 2012

**Lateral organization in single and double supported model membranes prepared by spincoating**

Adam Cohen Simonsen (Lecturer)

20. Mar 2008

**Lateral Organization in single and double supported membranes probed with AFM and fluorescence microscopy**

Adam Cohen Simonsen (Lecturer)

27. Sep 2007

**Liquid crystal textures in biomembranes**

Adam Cohen Simonsen (Lecturer)

13. Jun 2013

**Mejeriforeningens Forskningsfonds (MFF) styregruppe (External organisation)**

Adam Cohen Simonsen (Member)

1. Mar 2011 → 1. Jun 2014

**Mejeriforskningens dag**

Adam Cohen Simonsen (Participant)

27. Mar 2019

**Microscopy of domains patterns in membranes**

Adam Cohen Simonsen (Lecturer)

10. Apr 2008

**Microscopy of orientational texture patterns in membrane domains**

Adam Cohen Simonsen (Lecturer)

17. Jan 2013

**Monitoring lipase activity in planar lipid substrates: Large-scale relaxations in the substrate and single enzyme activity**

Adam Cohen Simonsen (Speaker)

2006

**Monolayer Workshop**

Adam Cohen Simonsen (Participant)

19. Jun 2008

**Nanobased sensors**

Adam Cohen Simonsen (Participant)

5. Dec 2007

**Nanomaterials in Denmark**

Adam Cohen Simonsen (Participant)

1. Jun 2007

**Nanomaterials in Denmark**

Adam Cohen Simonsen (Participant)

1. Jun 2007

**Nanostrukturer i mælk og mejeriprodukter visualiseret med højopløst mikroskopi**

Adam Cohen Simonsen (Lecturer)

21. Jun 2013

**Nanoteknologi**

Adam Cohen Simonsen (Lecturer)

16. Mar 2010

**Nanoteknologi**

Adam Cohen Simonsen (Lecturer)

11. Oct 2010

**Naturens egen nanoteknologi**

Adam Cohen Simonsen (Guest lecturer)

7. Nov 2007

**Novel approaches to investigate Structure, Aggregation and Practical Implications of Casein and Casein Micelles**

Adam Cohen Simonsen (Lecturer)

21. Nov 2014

**Oriental patterns in biomembranes: Using model systems to study liquid crystal textures in single domains**

Adam Cohen Simonsen (Lecturer)

21. Jun 2013

**Oriental texture and defects in gel domains of lipid bilayers**

Adam Cohen Simonsen (Lecturer)

23. Aug 2012

**Oriental texture of lipid membrane domains**

Adam Cohen Simonsen (Lecturer)

14. Apr 2014 → 16. Apr 2014

**Oriental texture of membrane domains**

Adam Cohen Simonsen (Lecturer)

16. Sep 2011

**Oriental texture of membrane domains: Effect of lipid composition and binding of a bacterial toxin.**

Adam Cohen Simonsen (Lecturer)

8. Feb 2015

**Ph.D. Bedømmelsesudvalg (External organisation)**

Adam Cohen Simonsen (Member)

28. Oct 2011

**PhD assessment committee (External organisation)**

Adam Cohen Simonsen (Chairman)

1. Dec 2016 → 1. Mar 2017

**Phospholipase A2 activation by homogenous and heterogeneous model membranes**

Adam Cohen Simonsen (Lecturer)

29. Mar 2007

**Phospholipase A2 activity towards phase-separated binary and ternary membranes**

Adam Cohen Simonsen (Speaker)

2006

**Physical Review Letters (Journal)**

Adam Cohen Simonsen (Editor)

1. Jan 2009

**Physical Review Letters (Journal)**

Adam Cohen Simonsen (Editor)

1. Jan 2009

**Plagiater : Plagiater set fra en juridisk og en etisk synsvinkel**

Adam Cohen Simonsen (Participant)

30. Oct 2008

**Planar Biomolecular Interfaces as Biological Model Systems: Preparation Methods and Characterization by Atomic Force and Fluorescence Microscopy**

Adam Cohen Simonsen (Speaker)

2006

**Poly-unsaturated Fats, Neural Function and Metal Health**

Adam Cohen Simonsen (Participant)

9. Aug 2007

**Qatar National Research Fund (External organisation)**

Adam Cohen Simonsen (Member)

2013 → ...

**Quantifying domain patterns and domain textures in lipid bilayers**

Adam Cohen Simonsen (Lecturer)

12. May 2010 → 15. May 2010

**Quantitative analysis of coarsening and spatial domain distribution in a ternary membrane**

Adam Cohen Simonsen (Lecturer)

21. Apr 2007

**Remodeling of Raft-Mimicking Membranes by Phospholipase A(2)**

Adam Cohen Simonsen (Lecturer)

17. Jun 2008

**SDU (Organisational unit)**

Adam Cohen Simonsen (Member)

13. Jan 2013

**Soft matter approaches to structured food**

Adam Cohen Simonsen (Participant)

2. Jul 2012 → 4. Jul 2012

**Spatial and temporal lateral organization in supported model membranes**

Adam Cohen Simonsen (Lecturer)

3. Oct 2007

**Spatial and temporal organization of lipid domains in spincoated model membranes**

Adam Cohen Simonsen (Lecturer)

18. Jun 2008

**Spatial Organization of Na<sup>+</sup>/K<sup>+</sup>-ATPase and Lipid Domains in Free-standing Membranes Captured on a Solid Support**

Adam Cohen Simonsen (Lecturer)

15. Oct 2015

**Spincoated Supported Membranes as Powerful Biomembrane Models**

Adam Cohen Simonsen (Lecturer)

25. Aug 2009

**Spincoated Supported Membranes for Studying Lipid Domains and Domain Textures: Inviteret foredrag**

Adam Cohen Simonsen (Lecturer)

10. Dec 2009

**Teater Momentum (External organisation)**

Adam Cohen Simonsen (Member)

1. Sep 2006 → 9. Feb 2007

**Texture of Membrane Domains**

Adam Cohen Simonsen (Lecturer)

18. Jun 2009

**University of Barcelona (External organisation)**

Adam Cohen Simonsen (Member)

7. Nov 2013

**University of Southern Denmark (External organisation)**

Adam Cohen Simonsen (Member)

1. Jun 2007 → 1. Oct 2007

**University of Southern Denmark (External organisation)**

Adam Cohen Simonsen (Member)

1. May 2007 → 1. Sep 2007

**Vejledning af studieretningsprojekt af gymnasieelev på Mulernes Legatskole**

Adam Cohen Simonsen (Supervisor)

1. Dec 2007 → 15. Dec 2007

**Working Groups Meeting, COST, Lamorlaye, France 10-13 May 2011**

Adam Cohen Simonsen (Speaker)

10. May 2011 → 13. May 2011