

Publication list for Steen Laugesen Hansen

Peer-reviewed publications

- 1) Hansen, S. (1990). Calculation of small-angle scattering profiles using Monte Carlo simulation, [*J. Appl. Cryst.* **23**, 344-346.](#)
- 2) Hansen, S. & Pedersen, J. S. (1991). A Comparison of Three Different Methods for Analysing Small-Angle Scattering Data, [*J. Appl. Cryst.* **24**, 541-548.](#)
- 3) Bauer, R., Behan, M., Hansen, S., Jones, G., Mortensen, K., Særmærk, T. & Øgøndal, L. (1991). Small-Angle Scattering Studies on Clathrin-Coated Vesicles, [*J. Appl. Cryst* **24**, 815-821.](#)
- 4) Bauer, R., Behan, M., Hansen, S., Jones, G., Mortensen, K., Pedersen, J.S. & Øgøndal, L. (1992). Contrast Variation Studies of Clathrin Coated Vesicles by Small-Angle Neutron Scattering, [*Eur. Biophys. J.* **21**, 129-136.](#)
- 5) Pedersen J.S., Hansen, S. & Bauer, R. (1994). The aggregation behavior of zinc-free insulin studied by small-angle neutron scattering, [*Eur. Biophys. J.* **22**, 379-389.](#)
- 6) Müller, J. J. & Hansen, S. (1994). A Study of High-Resolution X-ray Scattering Data Evaluation by the Maximum-Entropy Method, [*J. Appl. Cryst.* **27**, 257-270.](#)
- 7) Bauer, R., Hansen, S.L., Jones, G., Suenson, E., Thorsen, S. & Øgøndal L. (1994). Fibrin structures during tissue-type plasminogen activator-mediated fibrinolysis studied by laser light scattering: relation to fibrin enhancement of plasminogen activation, [*Eur. Biophys. J.* **23**, 239-252.](#)
- 8) Steenstrup, S. & Hansen, S. (1994). The Maximum-Entropy Method without the Positivity Constraint - Applications to the Determination of the Distance-Distribution Function in Small-Angle Scattering, [*J. Appl. Cryst* **27**, 574-580.](#)
- 9) Hansen, S. & Wilkins, S. W. (1994). On uncertainty in maximum-entropy maps and the generalization of classic MaxEnt, [*Acta Cryst.* **A50**, 547-550.](#)
- 10) Knott, R., Hansen, S. & Henderson, S. (1994). A Small-Angle X-ray Scattering Study of the Binding of Cyclosporin-A to Calmodulin, [*Journal of Structural Biology* **112**, 192-194.](#)
- 11) Pedersen J.S., Hansen, S. & Bauer, R. (1995). Scaling in the Aggregation Behavior of Zinc-free Insulin Studied by Small-angle Neutron Scattering. [*Il Nuovo Cimento* **16D**, 1447-1455.](#)
- 12) Pedersen J.S., Hansen, S. & Bauer, R. (1995). Aggregation behavior of zinc-free insulin studied by small-angle neutron scattering: analysis by use of a thermodynamic equilibrium model. [*Prog Colloid Polym Sci* **98**, 215-218.](#)
- 13) Knott., R.B., Capel, M., Hansen, S. & Handschumacher R.E. (1995). A Small-Angle Scattering Study of the Binding of Cyclosporin-A to Cyclophilin. [*J.Appl.Cryst.***28**, 546-552.](#)
- 14) Samsø, M., Daban J-R, Hansen, S. & Jones, G.R. (1995). Evidence for Sodium Dodecyl Sulfate-Protein Complexes Adopting a Necklace Structure in Conditions that Attempt to Simulate those for Gel Electrophoresis. [*Eur. J. Biochem.* **232**, 818-824.](#)

- 15) Bauer, R., Hansen, M., Hansen, S., Øgendal, L., Lomholt, S., Qvist, K. and Horne, D. (1995). The structure of casein aggregates during renneting studied by indirect Fourier transformation and inverse Laplace transformation of static and dynamic light scattering data respectively. [*J. Chem. Phys.* **103**, 2725-2737.](#)
- 16) Müller, J.J., Hansen, S., Lukowski, G. and Gast, K. (1995). Multimodal Particle Size Distribution or Fractal Surface of Acrylic Acid Copolymer Nanoparticles: A Small-Angle X-Ray Scattering Study Using Direct Fourier and Indirect Maximum Entropy Methods. [*J. Appl. Cryst.* **28**, 774-781.](#)
- 17) Hansen, S., Bauer, R., Lomholt S. B., Qvist, K., Pedersen, J. S. & Mortensen. K. (1996). Structure of Casein Micelles studied by Small-Angle Neutron Scattering. [*Eur. Biophys. J.* **24**, 143-147.](#)
- 18) Hemmingsen, L. & Hansen, S. (1995). Bayes Theorem Applied to Selection of Models in PAC. [*Zeitschrift Für Naturforschung.* **51a**, 422-426.](#)
- 19) Hansen, S. & Müller, J.J. (1996). The maximum-entropy method in small-angle scattering. In [*Maximum entropy and Bayesian methods* pp. 69-78](#), edited by Skilling, J. and Sibisi, S. Kluwer.
- 20) Müller, J.J., Hansen, S. & Pürschel, H-V. (1996). The use of small-angle scattering and the maximum-entropy method for shape-model determination from distance-distribution functions. [*J. Appl. Cryst.* **29**, 547-554.](#)
- 21) Bauer, R., Hansen, S. & Øgendal, L. (1998). Detection of intermediate oligomers, important for the formation of heat aggregates of beta-lactoglobulin. [*Int. dairy journal* **8**, 105-112.](#)
- 22) Bauer, R., Rischel, C., Hansen, S. & Øgendal, L. (1999). Heat-induced gelation of whey protein at high pH studied by combined UV spectroscopy and refractive index measurement after size exclusion chromatography and by insitu dynamic light scattering. [*Int. J of Food Science and Technology* **34**, 557-560.](#)
- 23) Hansen, S (2000). Bayesian estimation of hyperparameters for indirect Fourier transformation in small-angle scattering [*J. Appl. Cryst.* **33**, 1415-1421.](#)
- 24) Hansen, S (2003). Estimation of chord length distributions from small-angle scattering using indirect Fourier transformation. [*J. Appl. Cryst.* **36**, 1190-1196.](#)
- 25) Hansen, S. (2004). Translational friction coefficients for cylinders of arbitrary axial ratios - estimated by Monte Carlo simulation. [*J. Chem. Phys.* **121**, 9111-9115.](#)
- 26) Motawia, M.S., Damager, I., Olsen, C.E., Møller, B.L., Engelsen, S.B., Hansen, S., Øgendal, L.H. & Bauer, R. (2005). Comparative study of small linear and branched α -glucans using size exclusion chromatography and static and dynamic light scattering. [*Biomacromolecules.* **6**, 375-393.](#)
- 27) Abécassis, B., Testard, F., Arleth, L., Hansen, S., Grillo, I. & Zemb, T. (2006). Phase Topology, and Growth of Neutral Catanionic Reverse Micelles. [*Langmuir.* **22**, 8017-8028.](#)
- 28) Vestergaard, B. & Hansen, S. (2006). Application of Bayesian Analysis to Indirect Fourier Transformation in Small-Angle Scattering. [*J. Appl. Cryst.* **39**, 794-804.](#)
- 29) Abécassis, B., Testard, F., Arleth, L., Hansen, S., Grillo, I. & Zemb, T. (2007). Electrostatic Control of Spontaneous Curvature in Catanionic Reverse Micelles. [*Langmuir.* **23**, 9983-9989.](#)

- 30) Hansen, S. (2008). Estimation of the relaxation spectrum from dynamic experiments using Bayesian analysis and a new regularization constraint. [*Rheol. Acta.* **47**, 169-178.](#)
- 31) Hansen, S. (2008). Simultaneous estimation of the form factor and the structure factor for globular particles in small-angle scattering. [*J. Appl. Cryst.* **41**, 436-445.](#)
- 32) Hansen, S., Ray, P.M, Karlsson, A.O., Jørgensen, B., Borkardt, B., Petersen, B.L. & Ulvskov, P. (2011). Mechanical properties of plant cell walls probed by relaxation spectra. [*Plant. Physiol.* **155**, 246-258.](#)
- 33) Hansen, S. (2011). The structure factor in small-angle scattering and the effect of deviation from spherical symmetry. [*J. Appl. Cryst.* **44**, 265-271.](#)
- 34) Hansen, S. (2012). Monte Carlo estimation of the structure factor for hard bodies in small-angle scattering. [*J. Appl. Cryst.* **45**, 381-388.](#)
- 35) Hansen, S. (2012). BayesApp - a website for indirect transformation in small-angle scattering. [*J. Appl. Cryst.* **45**, 566-567.](#)
- 36) Hansen, S. (2013). Approximation of the structure factor for nonspherical hard bodies using polydisperse spheres. [*J. Appl. Cryst.* **46**, 1008-1016.](#)
- 37) Hansen, S. (2014). Update for BayesApp - a web site for analysis of small-angle scattering data. [*J. Appl. Cryst.* **47**, 1469-1471.](#)
- 38) Pedersen, M.C., Hansen, S.L., Markussen, B., Arleth, L. & Mortensen, K. (2014). Quantification of the information in small-angle scattering data. [*J. Appl. Cryst.* **47**, 2000-2010.](#)
- 39) Hansen, S. (2016). Estimation of the density distribution from small-angle scattering data. [*J. Appl. Cryst.* **49**, 856-865.](#)
- 40) Hansen, S. (2017). DLSanalysis.org - A web interface for analysis of dynamic light scattering data. [*Eur. Biophys. J.* **47**, 179-184.](#)
- 41) Larsen, A. H., Arleth, L. & Hansen, S. (2018). Analysis of small-angle scattering data using model fitting and Bayesian regularization. [*J. Appl. Cryst.* **51**, 1151-1161.](#)

Book Contributions

Hansen, S. (2012). Bayesian Methods in SAXS and SANS Structure Determination. In [*Bayesian Methods in Structural Bioinformatics, Statistics for Biology and Health*](#), edited by Hamelryck, T., Mardia, K., and Ferkinghoff-Borg, J., pp 313-342. Springer-Verlag, Heidelberg, Berlin.

Ph.d. Thesis

Hansen, S. (1991). [Small-Angle Scattering on Biomolecules modelled by Monte Carlo Simulation and analysed by Maximum Entropy](#), KVL.

Misc.

[Kronik Berlingske](#) (1999). Feature article about physics, cycling and doping. Published in the Danish newspaper Berlingske.

[Kronik Berlingske](#) (2013). Feature article about the changes in the academic level at Danish universities. Published in the Danish newspaper Berlingske.

[Kronik Berlingske](#) (2014). Feature article about the management at Danish universities. Published in the Danish newspaper Berlingske.

[Artikel](#) (2015). Opinion regarding the electronic student evaluations. Universitetavisen.

[Kronik Berlingske](#) (2015). Feature article about the management at Danish universities. Published in the Danish newspaper Berlingske.

[Artikel](#) (2016). Opinion about grading in Danish high schools. Published in the Danish newspaper Politiken (web).

[Artikel](#) (2016). Opinion about the academic level in the Danish educational system. Published in the Danish newspaper Politiken.

[Kronik Berlingske](#) (2017). Feature article about the academic level in Danish high schools. Published in the Danish newspaper Berlingske.

[Artikel](#) (2017). Opinion about the priorities of Danish universities. Published in the Danish newspaper Jyllands-Posten.

[Kronik Berlingske](#) (2017). Feature article about science and Danish primary schools. Published in the Danish newspaper Berlingske.

[Artikel](#) (2018). Opinion about the academic level in the Danish educational system. Published in the Danish newspaper Berlingske.

[Interview](#) (2018). In the Danish newspaper Berlingske.

[Kronik Berlingske](#) (2018). Feature article about the management of the Danish educational system. Published in the Danish newspaper Berlingske.

[Kronik Berlingske](#) (2019). Feature article about mathematics and the Danish educational system. Published in the Danish newspaper Berlingske.

[Artikel](#) (2019). Opinion about the necessity to reduce the number of students in high schools. Published in the Danish newspaper Berlingske.

[Interview](#) (2020). In the Danish newspaper Berlingske.
About the problems caused by the large number of students in high schools.

[Artikel](#) (2020). Opinion about the two ministers responsible for education. Published in the Danish newspaper Berlingske.

[Artikel](#) (2021). Opinion about mathematics and the problems in the Danish educational system. Published in the Danish newspaper Berlingske.

[Artikel](#) (2022). Opinion about ethnicity and education. Published in Berlingske.

[Artikel](#) (2023). Opinion about problems in Danish universities. Published in Berlingske.

Books for Teaching

Hansen S. (1997). Biofysik for Veterinærer, DSR-forlag. Latest edition from 2003.

Hansen S. (1997). Anvendt Fysik, DSR-forlag. Latest edition from 2003.

Hansen S. (2009). [Fysik for LIFE](#), Biofolia.