

Martin Cramer Pedersen

List of publications

- **Survey of mechanical and structural properties of highly symmetric sp²-conjugated carbon allotropes**
Eom & Pedersen
In preparation
- **Analysis of small-angle scattering data of complex biological systems**
Pedersen & Arleth
Book chapter in *Neutrons, X-rays and Light: Scattering Methods applied to Soft Condensed Matter*, Elsevier, Amsterdam, Editors: Oberdisse & Lindner, In preparation
- 2023 **Structural characterisation of α -synuclein-membrane interactions and the resulting aggregation using small angle scattering**
Galvignon, Barclay, Makasewicz, Marlet, Moulin, Devos, Linse, Martel, Porcar, Sparr, Pedersen, Roosen-Runge, Arleth, & Buell
J. Am. Chem. Soc., In review. Preprint at chemrxiv.org/engage/chemrxiv/article-details/6404ef6b63e8d44e596c3b8e
doi.org/10.26434/chemrxiv-2023-6hsh2
- 2023 **Shape2SAS - a website to simulate small-angle scattering data and pair distance distribution functions from geometrical shapes**
Larsen, Brookes, Pedersen, & Kirkensgaard
J. Appl. Crystallogr., In review. Preprint at arxiv.org/abs/2301.04976
doi.org/10.48550/arXiv.2301.04976
- 2023 **Exploring hyperbolic order in curved materials**
Pedersen, Hyde, Ramsden, & Kirkensgaard
Soft Matter 19, 1586-1595
doi.org/10.1039/D2SM01403C
- 2022 **Modeling of flexible membrane-bound biomolecular complexes for solution small-angle scattering**
Barclay, Kragelund, Arleth, & Pedersen
J. Colloid Interface Sci. 635, 611-621
doi.org/10.1016/j.jcis.2022.12.024
- 2022 **Refining structural models of membrane proteins with disordered domains in phospholipid nanodiscs**
Pedersen, Johansen, Roche, Järvå, Törnroth-Horsefield, & Arleth
Preprint at biorxiv.org/content/10.1101/2022.10.28.512841v1
doi.org/10.1101/2022.10.28.512841
- 2022 **Travel light: Essential packing tips for membrane proteins with an active lifestyle**
Johansen, Tidemand, Pedersen, & Arleth
Biochimie 205, 3-26
doi.org/10.1016/j.biochi.2022.07.014
- 2022 **Global fitting of multiple data frames from SEC-SAXS to investigate the structure of next-generation nanodiscs**
Barclay, Johansen, Tidemand, Arleth, & Pedersen
Acta Crystallogr. Sect. D Biol. Crystallogr. 78(4), 483-493
doi.org/10.1107/s2059798322001838

- 2022 **Non-ionic detergent facilitates formation of supercharged nanodiscs and the insertion of membrane protein**
Tidemand, Blemmer, Johansen, Arleth, & Pedersen
Biochim. Biophys. Acta Biomembr. 1864(6), 183884
doi.org/10.1016/j.bbamem.2022.183884
- 2022 **Mg²⁺-dependent conformational equilibria in CorA: an integrated view on transport regulation**
Johansen, Bonaccorsi, Bengtsen, Larsen, Tidemand, Pedersen, Huda, Berndtsson, Darwish, Yepuri, Martel, Pomorski, Bertarello, Sansom, Rapp, Crehuet, Schubeis, Lindorff-Larsen, Pintacuda, & Arleth
eLife 11, e71887
doi.org/10.7554/eLife.71887
- 2021 **The intrinsic group-subgroup structures of the Diamond and Gyroid minimal surfaces in their conventional unit cells**
Pedersen, Robins, & Hyde
Acta Crystallogr. Sect. A 78(1), 56-58
doi.org/10.1107/S2053273321012936
- 2021 **Experimental errors in small-angle scattering can be assessed using Bayesian indirect Fourier transformation**
Larsen & Pedersen* (*Equally contributing authors)*
J. Appl. Crystallogr. 54(5), 1281-1289
doi.org/10.1107/S1600576721006877
- 2021 **Order and disorder - an integrative structure of the full-length human growth hormone receptor**
Kassem, Araya-Secchi, Bugge, Barclay, Steinocher, Khondker, Wang, Lenard, Bürck, Sahin, Ulrich, Landreh, Pedersen, Rheinstädter, Pedersen, Lindorff-Larsen, Arleth, & Kragelund
Sci. Adv. 7, eabh3805
doi.org/10.1126/sciadv.abh3805
- 2021 **Structure and biophysical properties of supercharged and circularized nanodiscs**
Johansen, Luchini, Tidemand, Orioli, Martel, Porcar, Arleth, & Pedersen
Langmuir 37(22), 6681-6690
doi.org/10.1021/acs.langmuir.1c00560
- 2020 **Schwarzite nets: a wealth of 3-valent examples sharing similar topologies and symmetries**
Hyde & Pedersen* (*Equally contributing authors)*
Proc. Roy. Soc. A 477, 20200372
doi.org/10.1098/rspa.2020.0372
- 2020 **Aescin - a natural soap for the formation of lipid nanodiscs with tunable size**
Geisler, Pedersen, Preisig, Hannappel, Prévost, Dattani, Arleth, & Hellweg
Soft Matter 17, 1888-1900
doi.org/10.1039/D0SM02043E
- 2020 **Evolution of local motifs and topological proximity in self-assembled quasicrystalline phases**
Pedersen, Robins, Mortensen, & Kirkensgaard
Proc. Roy. Soc. A 476, 20200170
doi.org/10.1098/rspa.2020.0170
- 2019 **Aescin-Induced Conversion of Gel-Phase Lipid Membranes into Bicelle-Like Lipid Nanoparticles**
Geisler, Pedersen, Hannappel, Schweins, Prévost, Dattani, Arleth, & Hellweg
Langmuir 35(49), 16244-16255
doi.org/10.1021/acs.langmuir.9b02077

- 2019 **PSX: Protein-Solvent Exchange - Software for calculation of deuterium-exchange effects in SANS measurements from protein coordinates**
Pedersen, Wang, Tidemand, Martel, Lindorff-Larsen, & Arleth
 J. Appl. Crystallogr. 52, 1427–1436
 doi.org/10.1107/S1600576719012469
- 2019 **Circularized and solubility-enhanced MSPs facilitate simple and high yield production of stable nanodiscs for studies of membrane proteins in solution**
Johansen, Tidemand, Nguyen, Rand, Pedersen, & Arleth
 FEBS J. 286(9), 1734–1751
 doi.org/10.1111/febs.14766
- 2018 **Introducing SEC-SANS for studies of complex self-organised biological systems**
Johansen, Pedersen, Martel, Porcar, & Arleth
 Acta Crystallogr. Sect. D Biol. Crystallogr. 74(12), 1178–1191
 doi.org/10.1107/S2059798318007180
- 2018 **Polyhedra and packings from hyperbolic honeycombs**
Pedersen & Hyde
 Proc. Natl. Acad. Sci. U. S. A. 115(27), 6905–6910
 doi.org/10.1073/pnas.1720307115
- 2018 **Surface embeddings of the Klein and the Möbius-Kantor graphs**
Pedersen, Delgado-Friedrichs, & Hyde
 Acta Crystallogr. Sect. A 74(3), 223–232
 doi.org/10.1107/S2053273318002036
- 2017 **Invisible detergents for structure determination of membrane proteins by small-angle neutron scattering**
Midtgaard, Darwish, Pedersen, Huda, Larsen, Jensen, Kynde, Skar-Gislinge, Nielsen, Olesen, Blaise, Dorosz, Thorsen, Venskutonyté, Krintel, Møller, Frielinghaus, Gilbert, Martel, Kastrup, Jensen, Nissen, & Arleth
 FEBS J. 285(2), 357–371
 doi.org/10.1111/febs.14345
- 2016 **Hyperbolic crystallography of two-periodic surfaces and associated structures**
Pedersen & Hyde
 Acta Crystallogr. Sect. A 73(2), 124–134
 doi.org/10.1107/S2053273316019112
- 2015 **Structure and crystallinity in water dispersible photoactive nanoparticles for organic solar cells**
Pedersen, Pedersen, Simonsen, Brandt, Böttiger, Andersen, Wu, Zhiyuan, Krebs, Arleth, & Andresen
 J. Mater. Chem. A 3, 17022–17031
 doi.org/10.1039/C5TA04980F
- 2015 **Small-Angle X-Ray Scattering of the Cholesterol Incorporation into Human ApoA1-POPC Discoidal Particles**
Midtgaard, Pedersen, & Arleth
 Biophys. J. 109(2), 308–318
 doi.org/10.1016/j.bpj.2015.06.032
- 2015 **PET/CT Based In Vivo Evaluation of ⁶⁴Cu Labelled Nanodiscs in Tumor Bearing Mice**
Huda, Binderup, Pedersen, Midtgaard, Elema, Kjær, Jensen, & Arleth
 PLOS ONE 10(7), e0129310
 doi.org/10.1371/journal.pone.0129310
- 2014 **Quantification of the information in small-angle scattering data**
Pedersen, Hansen, Markussen, Arleth, & Mortensen
 J. Appl. Crystallogr. 47(6), 2000–2010
 doi.org/10.1107/S1600576714024017

- 2014 **Tiling patterns from ABC star molecules: 3-colored foams?**
Kirkensgaard, Pedersen, & Hyde
Soft Matter 10, 7182-7194
doi.org/10.1039/C4SM01052C
- 2014 **Small-angle scattering gives direct structural information about membrane protein inside lipid environment**
Kynde, Skar-Gislings, Pedersen, Midtgaard, Simonsen, Schweins, Mortensen, & Arleth
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- 2014 **Self-assembling peptides form nanodiscs that stabilize membrane proteins**
Midtgaard, Pedersen, Kirkensgaard, Sørensen, Mortensen, Jensen, & Arleth
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- 2013 **WillItFit - A Framework for Fitting of Constrained Models to Small-angle Scattering Data**
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