Complete list of Publications (Dr. Kyongok Kang)

1. K. Kang and F. Platten, “Electric-Field Induced Modulation of Amorphous Protein Aggregates: Polarization, Deformation, and Reorientation", Sci. Rep. 12: 3061, 2022.
2. K. Kang, “Characterization of orientation correlation kinetics: chiral-mesophase domains in suspensions charged DNA-rods”, J. Phys. Commun, 6, 015001, 2022.
3. K. Kang, Y. Ma, and K. Sadakane, “Direct visualization of local activities of long DNA strands via image–time correlation”, European Biophysics Journal 50:1139–1155, 2021.
4. K. Kang, “Chiral glass of charged DNA rods, Cavity loops”, J. Phys. Commun, 5, 065001, 2021.
5. K. Kang, “Response of shear in bulk orientations of charged DNA rods: Taylor- and Gradient-banding”, J. Phys. Commun, 5, 045011, 2021.
6. K. Kang, D. Lee, and J. Seo, “Frequency-responsive cooperativity of graphene oxide complexes under a low AC bulk electric field”, J. Mol. Liq. 335, 116151, 2021.
7. K. Kang, and A. Eremin, “Solvent-dependent morphology and anisotropic microscopic dynamics of cellulose nanocrystals under electric fields”, Phys. Rev. E. 103, 032606, 2021.
8. K. Kang, and K. Sadakane, “Long-time oscillations in correlation of lysozyme solutions and the effect of antagonistic salt in external electric field light scattering”, J. Phys. Commun. 5, 035003, 2021, https://doi.org/10.1088/2399-6528/abe7f.
9. K. Kang, “Equilibrium phase diagram and thermal responses of charged DNA-virus rod-suspensions at low ionic strengths”, Sci. Rep. 11: 3472, 2021.
10. C. Lee, S-A Jo, K. Kang, J. Dhont, J. Ferracane, and In-bog Lee, Shockwave application enhances the effect ofdentin desensitizer, dental materilas, 37, 113-119, 2021 https://doi.org/10.1016/j.dental.2020.10.027
11. K. Kang, P. Bertsch, and P. Fischer, “Coupling of long-wavelength density fluctuations to orientations in cellulose nanocrystal suspensions under external fields”, Phys. Rev. E. 100, 052606, 2019.
12. J. Van Rie, C. Schütz, A. Gençer, S. Lombardo, K. Kang, and W. Thielemans, “Anisotropic Diffusion and Phase Behavior of Cellulose Nanocrystal Suspensions", Langmuir, 35 (6), 2289-2302, 2019.
13. H. Jin, K. Kang, K-H Ahn, W. Briels, and J.K.G. Dhont, “Non-local Stresses in highly Non-uniformly Flowing Suspensions: The shear-curvature viscosity", J. Chem. Phys, 149, 014903, 2018.
14. A. Gençer, J. Van Rie, S. Lombardo, K. Kang, and W. Thielemans, “Effect of Gelation on the Colloidal Deposition of Cellulose Nanocrystal Films", Biomacromolecules, 19 (8), 3233-3243. 2018.
15. C. Schütz, J. Van Rie, S. Eyley, A. Gençer, H. van Gorp, S. Rosenfeldt, K. Kang, and W. Thielemans, "Effect of Source on the Properties and Behavior of Cellulose Nanocrystal Suspensions", ACS Sustainable Chemistry & Engineering, 6 (7), 8317-8324, 2018.
16. K. May, R. Stannarius, K. Kang, P. C. Kumar, S. Sprunt, A. Jakli, S. Klein, and A. Eremin “Collective dynamics in dispersions of anisometric pigment particles”, Journal of Molecular Liquids, 267, 322-329, 2018.
17. J.K.G. Dhont, K. Kang, H. Kriegs, O. Danko, J. Marakakis, and D. Vlassopoulos, “Nonuniform flow in soft glasses of colloidal rods”, Phys. Rev. Fluids. 2, 043301, 2017.
18. K. Kang, S.H. Piao, and H.J. Choi, “Synchronized oscillations of dimers in biphasic charged fd-virus suspensions”, Phys. Rev. E., 94, 020602(R), 2016.
19. K. Kang, “Soft-mode of charged chiral fibrous viruses (fd)”, Soft Matter, 12, 6385-6399, 2016.
20. K. Kang and J.K.G. Dhont,” An electric-field induced dynamical state in dispersions of highly charged colloidal rods: Comparison of experiment and theory”, Colloid. Polym. Sci. 293, 3325-3336, 2015.
21. K. Kang and J.K.G. Dhont, “Electric field–induced criticality and frequency responsive dynamics of charged rods”, Journal of Intelligent Material Systems and Structures, 1–6, DOI: 10.1177/1045389X15590272, 2015.
22. J.K.G. Dhont, and K. Kang, “Correction: An electric-field induced dynamical state in dispersions of charged colloidal rods”, Soft Matter, 11, 2893–2894, 2015.
23. K. Kang, “Charged colloidal rods out of Equilibrium”, Advances in Chemical Engineering and Science (ACES), Vol. 5, 23-32, January, 2015.
24. K. Kang, “Electric-field induced microdynamics of charged rods”, Frontiers in Physics, Vol. 2, Article 73, doi: 10.3389/fphy.2014.00073, December 2014.
25. H. Jin, K. Kang, K-H. Ahn, and J.K.G. Dhont,” Flow instability due to coupling of shear-gradients with

concentration: non-uniform flow of (hard-sphere) glasses", Soft Matter, 10, 9470-9485, 2014.

26. K. Kang, J.S. Hong, and J.K.G. Dhont, "Local interfacial migration of clay particles within an oil droplet in an aqueous environment", J. Phys. Chem. C, 118, 24803-24810, 2014.
27. K. Kang, "Nonequilbrium phase transitions and equilibrium textures of charged chiral rods (fd-viruses)", J. of Phys. Sci. and Appl. 4 (1), 26-35, 2014.
28. J.K.G. Dhont, and K. Kang, "An electric-field induced dynamical state in dispersions of charged colloidal rods", Soft Matter, 10, 1987-2007, 2014.
29. K. Kang, "Glass transition of repulsive charged rods (fd-viruses)", Soft Matter, 10, 3311-3324, 2014.
30. K. Kang, "Transient elastic waves in electric-field induced charged fibrous virus (fd) suspensions", International Conference on Material Science and Material Engineering (MSME), ISBN: 978-1-60595-171-3, 2014.
31. K. Kang, and J.K.G. Dhont, "Dynamic electric response of charged fibrous virus (fd) suspensions: Interactions of charged colloidal rods in AC electric field", Chapter 18, *Electrostatcis of Soft and Disordered Matter,* David Dean, Jure Dobnikar, Ali Naji, and Rudolf Podgornik, ed, ISBN 978-981-4411-85-1, Pan Stanford publishing, 2014.
32. J.K.G. Dhont, and K. Kang, *Solutions of Exercise in "An Introduction to Dynamics of Colloids",* ISBN 978-3-89336-882-2, Forschungszentrum Juelich GmbH, 2013.
33. K. Kang and J. K. G. Dhont, "Structural arrest and texture dynamics in suspensions of charged colloidal rods", Soft Matter, 9, 4401-4411, 2013.
34. K. Kang and J. K. G. Dhont, "Glass transition in suspensions of charged rods: Structural arrest and texture dynamics", Phys. Rev. Lett. 110, 015901, 2013.
35. H-J. Kweon, J. Ferracane, K. Kang, J.K.G. Dhont, and In-Bog Lee, "Spatio-temporal analysis of shrinkage vectors during photo-polymerization of composite", Dental Materials 29, 123601243, 2013.
36. K. Kang, "Dynamic frequency response of charged chiral rods", PIERS (Progress In Electromagnetic Research Symposium) Proceedings, pp. 18-20, Taipei, March 25-28, 2013.
37. K. Kang and J.K. G. Dhont, "A glass transition in suspension of charged fibrous viruses (fd): Structural arrest chiral texture-dynamics", AIP Conference proceedings, pp. 189-196, 4th International symposium on slow dynamics in complex systems, Sendai, Japan 2-7, December, 2012.
38. K. Kang and J.K.G. Dhont, "Electric-field induced pattern formation, microscopic dynamics and criticality in suspensions of charged fibrous viruses (fd)", 24th International Liquid Crystal Conference proceeding, Mainz, Germany, Aug. 19-24, 2012.
39. K. Kang, "Image time-correlation, dynamic light scattering and birefringence for the study of the response of anisometric colloids to external fields", Rev. Sci. Instrum. 82, 053903, 2011.
40. J. K. G. Dhont, K. Kang," Electric-field induced polarization of the layer of condensed ions on cylindrical colloids", Eur. Phys. J. E. 34, 40, 2011.
41. W. Briels, D. Vlassopoulos, K. Kang, J. K.G. Dhont, "Constitutive equations for the flow behavior of entangled polymeric systems: Application to star polymers", J. Chem. Phys. 134, 124901, 2011
42. J. K. G. Dhont, K. Kang, M. P. Lettinga, W. Briels, "Shear banding instabilities", KOR_AUS Rheology Journal 22, 291-308, 2010.
43. K. Kang, "Diffusivity in an electric-field-induced homeotropic phase of charged colloidal rods", Europhys. Lett. 92, 18002, 2010.
44. J. K. G. Dhont, and K. Kang," Electric-field-induced polarization and interactions of uncharged colloids in salt solutions", Eur. Phys. J. E., 33, 51-68, 2010.
45. K. Kang, "Mesoscopic relaxation time of dynamic image correlation spectroscopy", J. Biomedical Science and Engineering, 3, 625-632, 2010.
46. K. Kang, "Charged fibrous viruses (fd) in external electric fields: dynamics and orientational order", New Journal of Physics, 12, 063017, 2010.
47. K. Kang, and J. K. G. Dhont, "Electric-field induced transitions in suspensions of charged colloidal rods", Soft Matter, 6, 273, 2010
48. K. Kang, "Image and signal correlation of electric-field induced charged fibrous viruses (fd)", 31st Annual International Conference of the IEEE Engineering in Medicine and Biological Society (EMBS), Minneapolis, MN, USA, 2009.
49. K. Kang and J. K. G. Dhont, "Criticality in a non-equilibrium, driven system: Charged colloidal rods (fd-viruses)

in electric fields", Eur. Phys. J. E., 30, 333, 2009.
50. K. Kang, and J. K. G. Dhont, "Double-layer polarization induced transitions in suspensions of colloidal rods", Europhys. Lett. 84, 14005, 2008.
51. K. Kang, M. P. Lettinga, and J. K. G. Dhont, "Is vorticity banding due to an elastic instability?", Rheological Acta. 47, 499-508, 2008.
52. K. Kang, A. Wilk, A. Patkowski, and J. K. G. Dhont, "Diffusion of spheres in isotropic and nematic networks of rods: electrostatic interactions and hydrodynamic screening.", J. Chem. Phys. 126, 214501, 2007 (June 15, 2007 issue of Virtual Journal of Biological Physics Research)
53. K. Kang, and S. Sprunt, "Light-controlled polymerization kinetics of photostabilized cholesteric fingerprint rolls", Mol. Cryst. Liq. Cryst. Vol. 466, 23-38, 2007.
54. K. Kang, M. P. Lettinga, Z. Dogic, and J. K. G. Dhont, "Vorticity banding of rodlike virus suspensions", Phys. Rev. E. 74, 026307, 2006.
55. M. P. Lettinga, K. Kang, M. P. Lettinga, P. Holmqvist, A. Imhof, D. Derks, and Jan K. G. Dhont,"Nematic-isotropic spinodal decomposition kinetics of rodlike viruses", Phys. Rev. E. 73, 011412, 2006.
56. K. Kang, A. Wilk, J. Buitenhuis, A. Patkowski, and J. K. G. Dhont, "Diffusion of spheres in isotropic and nematic suspensions of rods", J. Chem. Phys. 124, 044907, 2006 (2006 issue of Virtual Journal of Biological Physics Research)
57. M. P. Lettinga, K. Kang, A. Imhof, D. Derks, and Jan K. G. Dhont, "Kinetic pathways of the nematic-isotropic phase transition as studied by confocal microscopy on rod-like viruses", J. Phys.: Condens. Matter. 17, S3609-S3618, 2005.
58. K. Kang, M. P. Lettinga, J. Buitenhuis, G. Meier, M. Ratajczyk, J. K. G. Dhont, and A. Patkowski, "Diffusion of spheres in crowded suspensions of rods." J. Chem. Phys. 122, 044905, 2005 (2005 issue of Virtual Journal of Biological Physics Research)
59. K. Kang, and S. Sprunt, "The dynamics of distorted cholesterics in a mesogenic vs. isotropic polymer network", Phys. Rev. E. 72, 031702, 2005.
60. J. Shi, C. Wang, V. Surendranath, K. Kang, J. T. Gleeson, "Material characterization for electroconvection." *Liquid Crystals,* Vol. 29, No. 6, 877-880, 2002.
61. K. Kang, L.C. Chien, and S. Sprunt, "Polymer-stabilized cholesteric liquid crystal microgratings: A comparison of polymer network formation and electro-optic properties for mesogenic and non-mesogenic monomers." *Liquid Crystals*, Vol. 29, No. 1, 9-18, 2002.