# Roel P A Dullens

List of Publications by Year
in descending order

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Layer-by-Layer Growth of Binary Colloidal Crystals. Science, 2002, 296, 106-109. | 12.6 | 378 |
| 2 | Two-Dimensional Melting of Colloidal Hard Spheres. Physical Review Letters, 2017, 118, 158001. | 7.8 | 149 |
| 3 | Superparamagnetic nickel colloidal nanocrystal clusters with antibacterial activity and bacteria binding ability. Nature Nanotechnology, 2018, 13, 478-482. | 31.5 | 132 |
| 4 | Viscoelasticity of blood and viscoelastic blood analogues for use in polydymethylsiloxane <i>in vitro</i> models of the circulatory system. Biomicrofluidics, 2013, 7, 34102. | 2.4 | 108 |
| 5 | Grain-Boundary Fluctuations in Two-Dimensional Colloidal Crystals. Physical Review Letters, 2010, 105, 168301. | 7.8 | 59 |
| 6 | Communication: Radial distribution functions in a two-dimensional binary colloidal hard sphere system. Journal of Chemical Physics, 2014, 140, 161106. | 3.0 | 59 |
| 7 | Monodisperse Coreâˆ’Shell Poly(methyl methacrylate) Latex Colloids. Langmuir, 2003, 19, 5963-5966. | 3.5 | 57 |
| 8 | Microscopic dynamics of synchronization in driven colloids. Nature Communications, 2015, 6, 7187. | 12.8 | 57 |
| 9 | Dynamic Broadening of the Crystal-Fluid Interface of Colloidal Hard Spheres. Physical Review Letters, 2006, 97, 228301. | 7.8 | 50 |
| 10 | Shaping colloidal bananas to reveal biaxial, splay-bend nematic, and smectic phases. Science, 2020, 369, 950-955. | 12.6 | 50 |
| 11 | Shear Thinning and Local Melting of Colloidal Crystals. Physical Review Letters, 2011, 107, 138301. | 7.8 | 49 |
| 12 | Direct measurement of the free energy by optical microscopy. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 529-531. | 7.1 | 45 |
| 13 | Effect of Hydrodynamic Interactions on Self-Diffusion of Quasi-Two-Dimensional Colloidal Hard Spheres. Physical Review Letters, 2015, 115, 268301. | 7.8 | 43 |
| 14 | Confinement Induced Splay-to-Bend Transition of Colloidal Rods. Physical Review Letters, 2012, 109, 108303. | 7.8 | 40 |
| 15 | Reentrant Surface Melting of Colloidal Hard Spheres. Physical Review Letters, 2004, 92, 195702. | 7.8 | 37 |
| 16 | Shape-Induced Frustration of Hexagonal Order in Polyhedral Colloids. Physical Review Letters, 2006, 96, 028304. | 7.8 | 32 |
| 17 | Coreâ€“Shell Particles for Simultaneous 3D Imaging and Optical Tweezing in Dense Colloidal Materials. Advanced Materials, 2016, 28, 8001-8006. | 21.0 | 30 |
| 18 | Devitrification of colloidal glasses in real space. Physical Review E, 2006, 73, 041401. | 2.1 | 26 |

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|---|---|---|---|
| 19 | Acousto-optically generated potential energy landscapes: Potential mapping using colloids under flow. Optics Express, 2012, 20, 28707. | 3.4 | 25 |
| 20 | Dislocation-controlled formation and kinetics of grain boundary loops in two-dimensional crystals. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 6922-6927. | 7.1 | 25 |
| 21 | Grain boundary pinning in doped hard sphere crystals. Soft Matter, 2009, 5, 2448. | 2.7 | 24 |
| 22 | Decoupled and simultaneous three-dimensional imaging and optical manipulation through a single objective. Optica, 2014, 1, 223. | 9.3 | 23 |
| 23 | Segregated Ice Growth in a Suspension of Colloidal Particles. Journal of Physical Chemistry B, 2016, 120, 3941-3949. | 2.6 | 23 |
| 24 | Colloidal particles driven across periodic optical-potential-energy landscapes. Physical Review E, 2016, 93, 012608. | 2.1 | 22 |
| 25 | Bulk dynamics of Brownian hard disks: Dynamical density functional theory versus experiments on two-dimensional colloidal hard spheres. Journal of Chemical Physics, 2018, 148, 104501. | 3.0 | 22 |
| 26 | Structure factors in a two-dimensional binary colloidal hard sphere system. Molecular Physics, 2018, 116, 3245-3257. | 1.7 | 22 |
| 27 | Colloidal hard spheres: cooking and looking. Soft Matter, 2006, 2, 805. | 2.7 | 21 |
| 28 | Synthesis of Colloidal SUâ€8 Polymer Rods Using Sonication. Advanced Materials, 2019, 31, e1807514. | 21.0 | 19 |
| 29 | Superconfinement tailors fluid flow at microscales. Nature Communications, 2015, 6, 7297. | 12.8 | 16 |
| 30 | Self-diffusion in two-dimensional binary colloidal hard-sphere fluids. Physical Review E, 2017, 95, 012614. | 2.1 | 16 |
| 31 | The effect of colloidal aggregates on fat crystal networks. Food and Function, 2017, 8, 352-359. | 4.6 | 16 |
| 32 | Anomalous Grain Growth in a Polycrystalline Monolayer of Colloidal Hard Spheres. Physical Review X, 2017, 7, . | 8.9 | 16 |
| 33 | Topological lifetimes of polydisperse colloidal hard spheres at a wall. Physical Review E, 2005, 71, 011405. | 2.1 | 14 |
| 34 | Emerging structural disorder in a suspension of uniformly dimpled colloidal particles. Soft Matter, 2013, 9, 9361. | 2.7 | 14 |
| 35 | Equilibrium Grain Boundary Segregation and Clustering of Impurities in Colloidal Polycrystalline Monolayers. Langmuir, 2016, 32, 12716-12724. | 3.5 | 14 |
| 36 | Deterministic aggregation kinetics of superparamagnetic colloidal particles. Journal of Chemical Physics, 2015, 143, 214903. | 3.0 | 13 |

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|---|---|---|---|
| 37 | Dynamic heterogeneities and non-Gaussian behavior in two-dimensional randomly confined colloidal fluids. Physical Review E, 2017, 95, 032602. | 2.1 | 13 |
| 38 | Colloidal Organosilica Spheres for Three-Dimensional Confocal Microscopy. Langmuir, 2019, 35, 7962-7969. | 3.5 | 12 |
| 39 | Towards Glasses with Permanent Stability. Physical Review Letters, 2021, 127, 215501. | 7.8 | 11 |
| 40 | Dynamic mode locking in a driven colloidal system: experiments and theory. New Journal of Physics, 2017, 19, 013010. | 2.9 | 10 |
| 41 | Generalized network theory of physical two-dimensional systems. Physical Review E, 2020, 101, 042309. | 2.1 | 10 |
| 42 | Directed self-assembly into low-density colloidal liquid crystal phases. Physical Review Materials, 2018, 2, . | 2.4 | 10 |
| 43 | Thermal Analog of Gimbal Lock in a Colloidal Ferromagnetic Janus Rod. Physical Review Letters, 2015, 115, 248301. | 7.8 | 9 |
| 44 | Frustrated crystallisation and melting in two-dimensional pentagonal confinement. Soft Matter, 2013, 9, 10586. | 2.7 | 7 |
| 45 | Exploring concentration, surface area and surface chemistry effects of colloidal aggregates on fat crystal networks. RSC Advances, 2017, 7, 28780-28787. | 3.6 | 6 |
| 46 | Bond-orientational order and Frankâ€™s constant in two-dimensional colloidal hard spheres. Journal of Physics Condensed Matter, 2018, 30, 104003. | 1.8 | 6 |
| 47 | Capillary nematisation of colloidal rods in confinement. Molecular Physics, 2018, 116, 2864-2871. | 1.7 | 6 |
| 48 | Transport of a colloidal particle driven across a temporally oscillating optical potential energy landscape. New Journal of Physics, 2019, 21, 083027. | 2.9 | 6 |
| 49 | Colloidal rods in optical potential energy landscapes. Journal Physics D: Applied Physics, 2019, 52, 024002. | 2.8 | 6 |
| 50 | Particle-Level Visualization of Hydrodynamic and Frictional Couplings in Dense Suspensions of Spherical Colloids. Physical Review X, 2021, 11, . | 8.9 | 6 |
| 51 | Communication: Contact values of pair distribution functions in colloidal hard disks by test-particle insertion. Journal of Chemical Physics, 2018, 148, 241102. | 3.0 | 4 |
| 52 | Synthesis of Rough Colloidal SU-8 Rods and Bananas via Nanoprecipitation. Langmuir, 2021, 37, 2900-2906. | 3.5 | 4 |
| 53 | Hierarchical self-assembly of polydisperse colloidal bananas into a two-dimensional vortex phase. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, . | 7.1 | 4 |
| 54 | Long-time self-diffusion in quasi-two-dimensional colloidal fluids of paramagnetic particles. Physical Review E, 2020, 101, 042609. | 2.1 | 2 |

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|---|---|---|---|
| 55 | Mechanical properties of colloidal crystals at fluid interfaces. JPhys Materials, 2021, 4, 025001. | 4.2 | 2 |
| 56 | Stabilisation of hollow colloidal TiO2 particles by partial coating with evenly distributed lobes. Soft Matter, 2021, 17, 1480-1486. | 2.7 | 2 |
| 57 | Grain boundary characterization from particle coordinates. Physical Review Materials, 2021, 5, . | 2.4 | 2 |
| 58 | Shrinkage mechanisms of grain boundary loops in two-dimensional colloidal crystals. European Physical Journal B, 2019, 92, 1. | 1.5 | 1 |