Gareth H Mckinley

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/1592063/publications.pdf

Version: 2024-02-01

344 papers 35,054 citations

95 h-index 176 g-index

353 all docs

353 docs citations

353 times ranked

23535 citing authors

| # | Article | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Rheo-chemistry of gelation in aiyu (fig) jelly. Food Hydrocolloids, 2022, 123, 107001. | 10.7 | 7 |
| 2 | OrthoChirp: A fast spectro-mechanical probe for monitoring transient microstructural evolution of complex fluids during shear. Journal of Non-Newtonian Fluid Mechanics, 2022, 301, 104744. | 2.4 | 8 |
| 3 | Why the Cox–Merz rule and Gleissle mirror relation work: A quantitative analysis using the Wagner integral framework with a fractional Maxwell kernel. Physics of Fluids, 2022, 34, . | 4.0 | 12 |
| 4 | Finite volume simulations of particle-laden viscoelastic fluid flows: application to hydraulic fracture processes. Engineering With Computers, 2022, 38, 5395-5421. | 6.1 | 11 |
| 5 | On Oreology, the fracture and flow of "milk's favorite cookie®― Physics of Fluids, 2022, 34, . | 4.0 | 8 |
| 6 | 10.1063/5.0085362.1., 2022,,. | | 0 |
| 7 | Versatile acid solvents for pristine carbon nanotube assembly. Science Advances, 2022, 8, eabm3285. | 10.3 | 15 |
| 8 | Computational rheometry of yielding and viscoplastic flow in vane-and-cup rheometer fixtures. Journal of Non-Newtonian Fluid Mechanics, 2022, 307, 104857. | 2.4 | 5 |
| 9 | In situ mechanical reinforcement of polymer hydrogels via metal-coordinated crosslink mineralization. Nature Communications, 2021, 12, 667. | 12.8 | 60 |
| 10 | Characterizing viscoelastic properties of synthetic and natural fibers and their coatings with a torsional pendulum. Soft Matter, 2021, 17, 4578-4593. | 2.7 | 2 |
| 11 | Crack morphologies in drying suspension drops. Soft Matter, 2021, 17, 8832-8837. | 2.7 | 12 |
| 12 | Time–connectivity superposition and the gel/glass duality of weak colloidal gels. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, . | 7.1 | 30 |
| 13 | An improved Capillary Breakup Extensional Rheometer to characterize weakly rate-thickening fluids: Applications in synthetic automotive oils. Journal of Non-Newtonian Fluid Mechanics, 2021, 291, 104496. | 2.4 | 11 |
| 14 | Substrateâ€Versatile Directâ€Write Printing of Carbon Nanotubeâ€Based Flexible Conductors, Circuits, and Sensors. Advanced Functional Materials, 2021, 31, 2100245. | 14.9 | 18 |
| 15 | Flexible Electronics: Substrateâ€Versatile Directâ€Write Printing of Carbon Nanotubeâ€Based Flexible Conductors, Circuits, and Sensors (Adv. Funct. Mater. 25/2021). Advanced Functional Materials, 2021, 31, 2170181. | 14.9 | 1 |
| 16 | Levitation of fizzy drops. Science Advances, 2021, 7, . | 10.3 | 11 |
| 17 | Spectral Universality of Elastoinertial Turbulence. Physical Review Letters, 2021, 127, 074501. | 7.8 | 21 |
| 18 | Medium amplitude parallel superposition (MAPS) rheology of a wormlike micellar solution. Rheologica Acta, 2021, 60, 729-739. | 2.4 | 2 |

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| 19 | The medium amplitude response of nonlinear Maxwell–Oldroyd type models in simple shear. Journal of Non-Newtonian Fluid Mechanics, 2021, 295, 104601. | 2.4 | 5 |
| 20 | Low-cost manganese dioxide semi-solid electrode for flow batteries. Joule, 2021, 5, 2934-2954. | 24.0 | 38 |
| 21 | Incorporating Rheological Nonlinearity into Fractional Calculus Descriptions of Fractal Matter and Multi-Scale Complex Fluids. Fractal and Fractional, 2021, 5, 174. | 3.3 | 16 |
| 22 | Polymers and Plastrons in Parallel Yield Enhanced Turbulent Drag Reduction. Fluids, 2020, 5, 197. | 1.7 | 4 |
| 23 | Medium amplitude parallel superposition (MAPS) rheology. Part 2: Experimental protocols and data analysis. Journal of Rheology, 2020, 64, 1263-1293. | 2.6 | 11 |
| 24 | Programmable Anisotropy and Percolation in Supramolecular Patchy Particle Gels. ACS Nano, 2020, 14, 17018-17027. | 14.6 | 21 |
| 25 | High-energy and high-power Zn–Ni flow batteries with semi-solid electrodes. Sustainable Energy and Fuels, 2020, 4, 4076-4085. | 4.9 | 14 |
| 26 | Lubricant-Impregnated Surfaces for Mitigating Asphaltene Deposition. ACS Applied Materials & Samp; Interfaces, 2020, 12, 28750-28758. | 8.0 | 5 |
| 27 | Stress decomposition in LAOS of dense colloidal suspensions. Journal of Rheology, 2020, 64, 343-351. | 2.6 | 18 |
| 28 | Medium amplitude parallel superposition (MAPS) rheology. Part 1: Mathematical framework and theoretical examples. Journal of Rheology, 2020, 64, 551-579. | 2.6 | 19 |
| 29 | Improved rheometry of yield stress fluids using bespoke fractal 3D printed vanes. Journal of Rheology, 2020, 64, 643-662. | 2.6 | 32 |
| 30 | Asphaltene Adsorption on Functionalized Solids. Langmuir, 2020, 36, 3894-3902. | 3.5 | 12 |
| 31 | Time-rate-transformation framework for targeted assembly of short-range attractive colloidal suspensions. Materials Today Advances, 2020, 5, 100026. | 5.2 | 24 |
| 32 | Rotary atomization of Newtonian and viscoelastic liquids. Physical Review Fluids, 2020, 5, . | 2.5 | 16 |
| 33 | Cooperative drag reduction in turbulent flows using polymer additives and superhydrophobic walls. Physical Review Fluids, 2020, 5, . | 2.5 | 18 |
| 34 | Geometry mediated friction reduction in Taylor-Couette flow. Physical Review Fluids, 2020, 5, . | 2.5 | 5 |
| 35 | Anti-fatigue-fracture hydrogels. Science Advances, 2019, 5, eaau8528. | 10.3 | 305 |
| 36 | Restoring universality to the pinch-off of a bubble. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 13780-13784. | 7.1 | 18 |

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| 37 | A generalised Phan–Thien—Tanner model. Journal of Non-Newtonian Fluid Mechanics, 2019, 269, 88-99. | 2.4 | 38 |
| 38 | Hydrodynamics control shear-induced pattern formation in attractive suspensions. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 12193-12198. | 7.1 | 53 |
| 39 | Geometric optimization of riblet-textured surfaces for drag reduction in laminar boundary layer flows. Physics of Fluids, 2019, 31, . | 4.0 | 34 |
| 40 | Shear melting and recovery of crosslinkable cellulose nanocrystal–polymer gels. Soft Matter, 2019, 15, 4401-4412. | 2.7 | 12 |
| 41 | Influence of textural statistics on drag reduction by scalable, randomly rough superhydrophobic surfaces in turbulent flow. Physics of Fluids, 2019, 31, . | 4.0 | 59 |
| 42 | Editorial: Viscoplastic fluids: From theory to application. Journal of Non-Newtonian Fluid Mechanics, 2019, 265, 140-142. | 2.4 | 0 |
| 43 | Fully-resolved simulations of particle-laden viscoelastic fluids using an immersed boundary method. Journal of Non-Newtonian Fluid Mechanics, 2019, 266, 80-94. | 2.4 | 35 |
| 44 | Multiscale Nature of Thixotropy and Rheological Hysteresis in Attractive Colloidal Suspensions under Shear. Physical Review Letters, 2019, 123, 248003. | 7.8 | 32 |
| 45 | Epidermal biopolysaccharides from plant seeds enable biodegradable turbulent drag reduction. Scientific Reports, 2019, 9, 18263. | 3.3 | 15 |
| 46 | A canonical framework for modeling elasto-viscoplasticity in complex fluids. Journal of Non-Newtonian Fluid Mechanics, 2019, 265, 116-132. | 2.4 | 42 |
| 47 | Time-resolved dynamics of the yielding transition in soft materials. Journal of Non-Newtonian Fluid Mechanics, 2019, 264, 117-134. | 2.4 | 64 |
| 48 | Reduced adhesion of sparkling water droplets. Physical Review Fluids, 2019, 4, . | 2.5 | 9 |
| 49 | Viscoelastic fishbones. Physical Review Fluids, 2019, 4, . | 2.5 | 2 |
| 50 | Thin films in partial wetting: stability, dewetting and coarsening. Journal of Fluid Mechanics, 2018, 845, 642-681. | 3.4 | 41 |
| 51 | Scalable and durable polymeric icephobic and hydrate-phobic coatings. Soft Matter, 2018, 14, 3443-3454. | 2.7 | 47 |
| 52 | Time-Resolved Mechanical Spectroscopy of Soft Materials via Optimally Windowed Chirps. Physical Review X, 2018, 8, . | 8.9 | 21 |
| 53 | Plastron Regeneration on Submerged Superhydrophobic Surfaces Using In Situ Gas Generation by Chemical Reaction. ACS Applied Materials & Samp; Interfaces, 2018, 10, 33684-33692. | 8.0 | 47 |
| 54 | Enhancing the Performance of Viscous Electrode-Based Flow Batteries Using Lubricant-Impregnated Surfaces. ACS Applied Energy Materials, 2018, 1, 3614-3621. | 5.1 | 8 |

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| 55 | Theoretical and numerical analysis of unsteady fractional viscoelastic flows in simple geometries. Computers and Fluids, 2018, 174, 14-33. | 2.5 | 21 |
| 56 | Computing the linear viscoelastic properties of soft gels using an optimally windowed chirp protocol. Journal of Rheology, 2018, 62, 1037-1050. | 2.6 | 28 |
| 57 | Fog Water Collection Effectiveness: Mesh Intercomparisons. Aerosol and Air Quality Research, 2018, 18, 270-283. | 2.1 | 63 |
| 58 | Describing the firmness, springiness and rubberiness of food gels using fractional calculus. Part I: Theoretical framework. Food Hydrocolloids, 2017, 62, 311-324. | 10.7 | 48 |
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| 61 | Microstructural Rearrangements and their Rheological Implications in a Model Thixotropic Elastoviscoplastic Fluid. Physical Review Letters, 2017, 118, 048003. | 7.8 | 59 |
| 62 | Visible light guided manipulation of liquid wettability on photoresponsive surfaces. Nature Communications, 2017, 8, 14968. | 12.8 | 89 |
| 63 | Fabrication and Wettability Study of WO3 Coated Photocatalytic Membrane for Oil-Water Separation: A Comparative Study with ZnO Coated Membrane. Scientific Reports, 2017, 7, 1686. | 3.3 | 57 |
| 64 | Nonlinear Viscoelasticity and Generalized Failure Criterion for Polymer Gels. ACS Macro Letters, 2017, 6, 663-667. | 4.8 | 40 |
| 65 | Mapping thixo-elasto-visco-plastic behavior. Rheologica Acta, 2017, 56, 195-210. | 2.4 | 79 |
| 66 | Thermokinematic memory and the thixotropic elasto-viscoplasticity of waxy crude oils. Journal of Rheology, 2017, 61, 427-454. | 2.6 | 75 |
| 67 | Icephobic Surfaces Induced by Interfacial Nonfrozen Water. ACS Applied Materials & Amp; Interfaces, 2017, 9, 4202-4214. | 8.0 | 138 |
| 68 | Drag reduction using wrinkled surfaces in high Reynolds number laminar boundary layer flows. Physics of Fluids, 2017, 29, . | 4.0 | 49 |
| 69 | Age-dependent capillary thinning dynamics of physically-associated salivary mucin networks. Journal of Rheology, 2017, 61, 1309-1326. | 2.6 | 10 |
| 70 | Kinetics of Photoinduced Wettability Switching on Nanoporous Titania Surfaces under Oil. Advanced Materials Interfaces, 2017, 4, 1700462. | 3.7 | 16 |
| 71 | A Rheological Study of the Association and Dynamics of MUC5AC Gels. Biomacromolecules, 2017, 18, 3654-3664. | 5.4 | 122 |
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| 80 | Ultrathin high-resolution flexographic printing using nanoporous stamps. Science Advances, 2016, 2, e1601660. | 10.3 | 89 |
| 81 | Complex Fluids and Hydraulic Fracturing. Annual Review of Chemical and Biomolecular Engineering, 2016, 7, 415-453. | 6.8 | 141 |
| 82 | A low-dissipation, pumpless, gravity-induced flow battery. Energy and Environmental Science, 2016, 9, 1760-1770. | 30.8 | 39 |
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| 84 | Ligament Mediated Fragmentation of Viscoelastic Liquids. Physical Review Letters, 2016, 117, 154502. | 7.8 | 57 |
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| 87 | Elastic instabilities in planar elongational flow of monodisperse polymer solutions. Scientific Reports, 2016, 6, 33029. | 3.3 | 80 |
| 88 | Sustained drag reduction in a turbulent flow using a low-temperature Leidenfrost surface. Science Advances, 2016, 2, e1600686. | 10.3 | 92 |
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| 91 | Dynamics of particle migration in channel flow of viscoelastic fluids. Journal of Fluid Mechanics, 2015, 785, 486-505. | 3.4 | 96 |
| 92 | Colloidal Suspensions: Biphasic Electrode Suspensions for Li-lon Semi-solid Flow Cells with High Energy Density, Fast Charge Transport, and Low-Dissipation Flow (Adv. Energy Mater. 15/2015). Advanced Energy Materials, 2015, 5, n/a-n/a. | 19.5 | 0 |
| 93 | Mobility of power-law and Carreau fluids through fibrous media. Physical Review E, 2015, 92, 063012. | 2.1 | 30 |
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| 97 | Investigation into the Formation and Adhesion of Cyclopentane Hydrates on Mechanically Robust Vapor-Deposited Polymeric Coatings. Langmuir, 2015, 31, 6186-6196. | 3.5 | 46 |
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| 102 | An analytic solution for capillary thinning and breakup of FENE-P fluids. Journal of Non-Newtonian Fluid Mechanics, 2015, 218, 53-61. | 2.4 | 31 |
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| 111 | An analytical solution to the extended Navier–Stokes equations using the Lambert <i>W</i> function. AICHE Journal, 2014, 60, 1413-1423. | 3.6 | 10 |
| 112 | Inertio-elastic focusing of bioparticles in microchannels at high throughput. Nature Communications, 2014, 5, 4120. | 12.8 | 173 |
| 113 | Polysulfide Flow Batteries Enabled by Percolating Nanoscale Conductor Networks. Nano Letters, 2014, 14, 2210-2218. | 9.1 | 201 |
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| 116 | A fractional K-BKZ constitutive formulation for describing the nonlinear rheology of multiscale complex fluids. Journal of Rheology, 2014, 58, 1751-1788. | 2.6 | 86 |
| 117 | A comprehensive constitutive law for waxy crude oil: a thixotropic yield stress fluid. Soft Matter, 2014, 10, 6619-6644. | 2.7 | 183 |
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| 125 | Dropwise Condensation of Low Surface Tension Fluids on Omniphobic Surfaces. Scientific Reports, 2014, 4, 4158. | 3.3 | 173 |
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| 129 | Flow field visualization of entangled polybutadiene solutions under nonlinear viscoelastic flow conditions. Journal of Rheology, 2013, 57, 1411-1428. | 2.6 | 57 |
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| 140 | Sol–Gel Synthesis of \$hbox{Au/Cu-TiO}_{2}\$ Nanocomposite and Their Morphological and Optical Properties. IEEE Photonics Journal, 2013, 5, 2201908-2201908. | 2.0 | 18 |
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| 147 | Optimized Cross-Slot Flow Geometry for Microfluidic Extensional Rheometry. Physical Review Letters, 2012, 109, 128301. | 7.8 | 116 |
| 148 | Multiple Shear-Banding Transitions for a Model of Wormlike Micellar Solutions. SIAM Journal on Applied Mathematics, 2012, 72, 1192-1212. | 1.8 | 24 |
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| 162 | Magnetorheology in an aging, yield stress matrix fluid. Rheologica Acta, 2012, 51, 579-593. | 2.4 | 38 |

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| 165 | Microrheometry of sub-nanolitre biopolymer samples: non-Newtonian flow phenomena of carnivorous plant mucilage. Soft Matter, 2011, 7, 10889. | 2.7 | 54 |
| 166 | Criterion for purely elastic Taylor-Couette instability in the flows of shear-banding fluids. Europhysics Letters, 2011, 96, 44004. | 2.0 | 33 |
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