List of Publications by Year in descending order

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HWANKVILLEE

| # | Article | IF | CITATIONS |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|
| 1 | The centrosomal protein nephrocystin-6 is mutated in Joubert syndrome and activates transcription factor ATF4. Nature Genetics, 2006, 38, 674-681. | 21.4 | 535 |
| 2 | Molecular Dynamics Studies of Polyethylene Oxide and Polyethylene Glycol: Hydrodynamic Radius and Shape Anisotropy. Biophysical Journal, 2008, 95, 1590-1599. | 0.5 | 415 |
| 3 | A Coarse-Grained Model for Polyethylene Oxide and Polyethylene Glycol: Conformation and Hydrodynamics. Journal of Physical Chemistry B, 2009, 113, 13186-13194. | 2.6 | 338 |
| 4 | Molecular Dynamics Simulations of PAMAM Dendrimer-Induced Pore Formation in DPPC Bilayers with a Coarse-Grained Model. Journal of Physical Chemistry B, 2006, 110, 18204-18211. | 2.6 | 196 |
| 5 | Coarse-Grained Molecular Dynamics Studies of the Concentration and Size Dependence of Fifth- and Seventh-Generation PAMAM Dendrimers on Pore Formation in DMPC Bilayer. Journal of Physical Chemistry B, 2008, 112, 7778-7784. | 2.6 | 155 |
| 6 | Lipid Bilayer Curvature and Pore Formation Induced by Charged Linear Polymers and Dendrimers: The Effect of Molecular Shape. Journal of Physical Chemistry B, 2008, 112, 12279-12285. | 2.6 | 106 |
| 7 | Coarse-Grained Model for PEGylated Lipids: Effect of PEGylation on the Size and Shape of Self-Assembled Structures. Journal of Physical Chemistry B, 2011, 115, 7830-7837. | 2.6 | 104 |
| 8 | Molecular Dynamics Studies of the Size, Shape, and Internal Structure of 0% and 90% Acetylated Fifth-Generation Polyamidoamine Dendrimers in Water and Methanol. Journal of Physical Chemistry B, 2006, 110, 4014-4019. | 2.6 | 85 |
| 9 | Multiscale Modeling of Dendrimers and Their Interactions with Bilayers and Polyelectrolytes. Molecules, 2009, 14, 423-438. | 3.8 | 82 |
| 10 | Effects of PEGylation on the Size and Internal Structure of Dendrimers: Self-Penetration of Long PEG Chains into the Dendrimer Core. Macromolecules, 2011, 44, 2291-2298. | 4.8 | 82 |
| 11 | In vitro blood cell viability profiling of polymers used in molecular assembly. Scientific Reports, 2017, 7, 9481. | 3.3 | 76 |
| 12 | Adsorption of Plasma Proteins onto PEGylated Lipid Bilayers: The Effect of PEG Size and Grafting Density. Biomacromolecules, 2016, 17, 1757-1765. | 5.4 | 75 |
| 13 | Molecular Dynamics Study of the Structure and Interparticle Interactions of Polyethylene Glycol-Conjugated PAMAM Dendrimers. Journal of Physical Chemistry B, 2009, 113, 13202-13207. | 2.6 | 60 |
| 14 | Cytoprotective Self-assembled RGD Peptide Nanofilms for Surface Modification of Viable Mesenchymal Stem Cells. Chemistry of Materials, 2017, 29, 2055-2065. | 6.7 | 51 |
| 15 | Structure and Dynamics of Helix-0 of the N-BAR Domain in Lipid Micelles and Bilayers. Biophysical Journal, 2008, 95, 4315-4323. | 0.5 | 47 |
| 16 | Self-Assembly of Lipids and Single-Walled Carbon Nanotubes: Effects of Lipid Structure and PEGylation. Journal of Physical Chemistry C, 2012, 116, 9327-9333. | 3.1 | 41 |
| 17 | Beneficial roles of H-donors as diluent and H-shuttle for asphaltenes in catalytic upgrading of vacuum residue. Chemical Engineering Journal, 2017, 314, 1-10. | 12.7 | 41 |
| 18 | Membrane Pore Formation Induced by Acetylated and Polyethylene Glycol-Conjugated Polyamidoamine Dendrimers. Journal of Physical Chemistry C, 2011, 115, 5316-5322. | 3.1 | 39 |

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|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|
| 19 | Molecular Simulations of PEGylated Biomolecules, Liposomes, and Nanoparticles for Drug Delivery Applications. Pharmaceutics, 2020, 12, 533. | 4.5 | 38 |
| 20 | Quantitative Interpretation of Hydration Dynamics Enabled the Fabrication of a Zwitterionic Antifouling Surface. ACS Applied Materials & amp; Interfaces, 2020, 12, 7951-7965. | 8.0 | 38 |
| 21 | Effects of Nanoparticle Electrostatics and Protein–Protein Interactions on Corona Formation: Conformation and Hydrodynamics. Small, 2020, 16, e1906598. | 10.0 | 37 |
| 22 | Molecular Modeling of PEGylated Peptides, Dendrimers, and Single-Walled Carbon Nanotubes for Biomedical Applications. Polymers, 2014, 6, 776-798. | 4.5 | 34 |
| 23 | Molecular Dynamics Studies of PEGylated Single-Walled Carbon Nanotubes: The Effect of PEG Size and Grafting Density. Journal of Physical Chemistry C, 2013, 117, 26334-26341. | 3.1 | 32 |
| 24 | Effects of PEGylation on the Binding Interaction of Magainin 2 and Tachyplesin I with Lipid Bilayer Surface. Langmuir, 2013, 29, 14214-14221. | 3.5 | 31 |
| 25 | Molecular Dynamics Studies of the Size and Internal Structure of the PAMAM Dendrimer Grafted with Arginine and Histidine. Macromolecules, 2011, 44, 8681-8686. | 4.8 | 30 |
| 26 | Reverse Actuation of Polyelectrolyte Effect for <i>In Vivo</i> Antifouling. ACS Nano, 2021, 15, 6811-6828. | 14.6 | 30 |
| 27 | Synergistic effects of magainin 2 and PGLa on their heterodimer formation, aggregation, and insertion into the bilayer. RSC Advances, 2015, 5, 2047-2055. | 3.6 | 27 |
| 28 | Interparticle Dispersion, Membrane Curvature, and Penetration Induced by Single-Walled Carbon Nanotubes Wrapped with Lipids and PEGylated Lipids. Journal of Physical Chemistry B, 2013, 117, 1337-1344. | 2.6 | 26 |
| 29 | Investigation of Ion Channel Activities of Gramicidin A in the Presence of Ionic Liquids Using Model Cell Membranes. Scientific Reports, 2015, 5, 11935. | 3.3 | 24 |
| 30 | Molecular Dynamics Simulations of the Anchoring and Tilting of the Lung-Surfactant Peptide SP-B1-25 in Palmitic Acid Monolayers. Biophysical Journal, 2005, 89, 3807-3821. | 0.5 | 21 |
| 31 | Molecular Dynamics Studies of PEGylated α-Helical Coiled Coils and Their Self-Assembled Micelles. Langmuir, 2014, 30, 8848-8855. | 3.5 | 20 |
| 32 | Structures, dynamics, and hydrogen-bond interactions of antifreeze proteins in TIP4P/Ice water and their dependence on force fields. PLoS ONE, 2018, 13, e0198887. | 2.5 | 20 |
| 33 | Formulation Optimization and In Vivo Proof-of-Concept Study of Thermosensitive Liposomes Balanced by Phospholipid, Elastin-Like Polypeptide, and Cholesterol. PLoS ONE, 2014, 9, e103116. | 2.5 | 20 |
| 34 | Isolating a Trimer Intermediate in the Self-Assembly of E2 Protein Cage. Biomacromolecules, 2012, 13, 699-705. | 5.4 | 19 |
| 35 | Effect of Arginine-Rich Peptide Length on the Structure and Binding Strength of siRNA–Peptide Complexes. Journal of Physical Chemistry B, 2013, 117, 6917-6926. | 2.6 | 18 |
| 36 | The binding and insertion of imidazolium-based ionic surfactants into lipid bilayers: the effects of the surfactant size and salt concentration. Physical Chemistry Chemical Physics, 2015, 17, 5725-5733. | 2.8 | 18 |

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| 37 | Effects of imidazolium-based ionic liquids on the stability and dynamics of gramicidin A and lipid bilayers at different salt concentrations. Journal of Molecular Graphics and Modelling, 2015, 61, 53-60. | 2.4 | 18 |
| 38 | Effect of polyelectrolyte size on multilayer conformation and dynamics at different temperatures and salt concentrations. Journal of Molecular Graphics and Modelling, 2016, 70, 246-252. | 2.4 | 17 |
| 39 | All-atom simulations and free-energy calculations of coiled-coil peptides with lipid bilayers: binding strength, structural transition, and effect on lipid dynamics. Scientific Reports, 2016, 6, 22299. | 3.3 | 17 |
| 40 | Aggregation and insertion of melittin and its analogue MelP5 into lipid bilayers at different concentrations: effects on pore size, bilayer thickness and dynamics. Physical Chemistry Chemical Physics, 2017, 19, 7195-7203. | 2.8 | 17 |
| 41 | Transition-Metal Dichalcogenide Artificial Antibodies with Multivalent Polymeric Recognition Phases for Rapid Detection and Inactivation of Pathogens. Journal of the American Chemical Society, 2021, 143, 14635-14645. | 13.7 | 17 |
| 42 | Effects of the Size, Shape, and Structural Transition of Thermosensitive Polypeptides on the Stability of Lipid Bilayers and Liposomes. Macromolecules, 2012, 45, 7304-7312. | 4.8 | 16 |
| 43 | Effects of the asphaltene structure and the tetralin/heptane solvent ratio on the size and shape of asphaltene aggregates. Physical Chemistry Chemical Physics, 2017, 19, 13931-13940. | 2.8 | 16 |
| 44 | Dynamics and stability of lipid bilayers modulated by thermosensitive polypeptides, cholesterols, and PEGylated lipids. Physical Chemistry Chemical Physics, 2014, 16, 3763. | 2.8 | 15 |
| 45 | Effects of temperature, salt concentration, and the protonation state on the dynamics and hydrogen-bond interactions of polyelectrolyte multilayers on lipid membranes. Physical Chemistry Chemical Physics, 2016, 18, 6691-6700. | 2.8 | 15 |
| 46 | Molecular Modeling of Protein Corona Formation and Its Interactions with Nanoparticles and Cell Membranes for Nanomedicine Applications. Pharmaceutics, 2021, 13, 637. | 4.5 | 15 |
| 47 | Effect of lipid shape on toroidal pore formation and peptide orientation in lipid bilayers. Physical Chemistry Chemical Physics, 2017, 19, 21340-21349. | 2.8 | 14 |
| 48 | Effect of low levels of lipid oxidation on the curvature, dynamics, and permeability of lipid bilayers and their interactions with cationic nanoparticles. Journal Physics D: Applied Physics, 2018, 51, 164002. | 2.8 | 13 |
| 49 | Supramolecular Functionalization for Improving Thermoelectric Properties of Single-Walled Carbon Nanotubes–Small Organic Molecule Hybrids. ACS Applied Materials & Interfaces, 2020, 12, 51387-51396. | 8.0 | 13 |
| 50 | Membrane penetration and curvature induced by single-walled carbon nanotubes: the effect of diameter, length, and concentration. Physical Chemistry Chemical Physics, 2013, 15, 16334. | 2.8 | 11 |
| 51 | Effect of peptide conformation on TiO2 biomineralization. Dalton Transactions, 2013, 42, 13817. | 3.3 | 11 |
| 52 | Structural effects of tachyplesin I and its linear derivative on their aggregation and mobility in lipid bilayers. Journal of Molecular Graphics and Modelling, 2015, 59, 123-128. | 2.4 | 11 |
| 53 | Adsorption of plasma proteins onto PEGylated single-walled carbon nanotubes: The effects of protein shape, PEG size and grafting density. Journal of Molecular Graphics and Modelling, 2017, 75, 1-8. | 2.4 | 11 |
| 54 | Alpha-Hederin Nanopore for Single Nucleotide Discrimination. ACS Nano, 2019, 13, 1719-1727. | 14.6 | 11 |

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| 55 | Dispersion and bilayer interaction of single-walled carbon nanotubes modulated by covalent and noncovalent PEGylation. Molecular Simulation, 2015, 41, 1254-1263. | 2.0 | 10 |
| 56 | Design of a reversible inversed pH-responsive caged protein. Biomaterials Science, 2015, 3, 627-635. | 5.4 | 9 |
| 57 | Effects of hydrophobic and hydrogen-bond interactions on the binding affinity of antifreeze proteins to specific ice planes. Journal of Molecular Graphics and Modelling, 2019, 87, 48-55. | 2.4 | 9 |
| 58 | Multilayer Nanofilms via Inkjet Printing for Stabilizing Growth Factor and Designing Desired Cell Developments. Advanced Healthcare Materials, 2017, 6, 1700216. | 7.6 | 8 |
| 59 | Modulation of the Vault Protein-Protein Interaction for Tuning of Molecular Release. Scientific Reports, 2017, 7, 14816. | 3.3 | 8 |
| 60 | Effect of Protein Corona on Nanoparticle–Lipid Membrane Binding: The Binding Strength and Dynamics. Langmuir, 2021, 37, 3751-3760. | 3.5 | 8 |
| 61 | Multivalent Nanosheet Antibody Mimics for Selective Microbial Recognition and Inactivation. Advanced Materials, 2021, 33, e2101376. | 21.0 | 8 |
| 62 | Effects of imidazolium-based ionic surfactants on the size and dynamics of phosphatidylcholine bilayers with saturated and unsaturated chains. Journal of Molecular Graphics and Modelling, 2015, 60, 162-168. | 2.4 | 7 |
| 63 | Mechanistic Pathway of Lipid Phase-Dependent Lipid Corona Formation on Phenylalanine-Functionalized Gold Nanoparticles: A Combined Experimental and Molecular Dynamics Simulation Study. Journal of Physical Chemistry B, 2022, 126, 2241-2255. | 2.6 | 7 |
| 64 | Effect of the structural difference between Bax-α5 and Bcl-xL-α5 on their interactions with lipid bilayers. Physical Chemistry Chemical Physics, 2014, 16, 981-988. | 2.8 | 6 |
| 65 | Heterodimer and pore formation of magainin 2 and PGLa: The anchoring and tilting of peptides in lipid bilayers. Biochimica Et Biophysica Acta - Biomembranes, 2020, 1862, 183305. | 2.6 | 6 |
| 66 | Self-assembly of mixtures of a dendrimer and lipids: effects of hydrophobicity and electrostatics. Molecular Simulation, 2012, 38, 534-539. | 2.0 | 5 |
| 67 | Corona Formation: Effects of Nanoparticle Electrostatics and Protein–Protein Interactions on Corona Formation: Conformation and Hydrodynamics (Small 10/2020). Small, 2020, 16, 2070054. | 10.0 | 5 |
| 68 | Effects of salt on the size and internal structure of PAMAM dendrimers at different pH. Molecular Simulation, 2012, 38, 589-594. | 2.0 | 4 |
| 69 | Supramolecular Protein Assembly Retains Its Structural Integrity at Liquid–Liquid Interface. Advanced Materials Interfaces, 2020, 7, 1901674. | 3.7 | 4 |
| 70 | Self-assembled DNA hollow spheres from microsponges. Biofabrication, 2019, 11, 025016. | 7.1 | 3 |
| 71 | Topological analysis of single-stranded DNA with an alpha-hederin nanopore. Biosensors and Bioelectronics, 2021, 171, 112711. | 10.1 | 3 |
| 72 | Allâ€Atom Simulations and Freeâ€Energy Calculations of Antibodies Bound to the Spike Protein of SARSâ€CoVâ€2: The Binding Strength and Multivalent Hydrogenâ€Bond Interactions. Advanced Theory and Simulations, 2021, 4, 2100012. | 2.8 | 2 |

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| 73 | Supramolecular Assemblies: Supramolecular Protein Assembly Retains Its Structural Integrity at Liquid–Liquid Interface (Adv. Mater. Interfaces 4/2020). Advanced Materials Interfaces, 2020, 7, 2070021. | 3.7 | 1 |
| 74 | A simple strategy for signal enhancement in lateral flow assays using superabsorbent polymers. Mikrochimica Acta, 2021, 188, 364. | 5.0 | 1 |
| 75 | Disassembly and trimer formation of E2 protein cage: the effects of C-terminus, salt, and protonation state. Journal Physics D: Applied Physics, 2018, 51, 365402. | 2.8 | 0 |
| 76 | Antibacterial Strategies: Multivalent Nanosheet Antibody Mimics for Selective Microbial Recognition and Inactivation (Adv. Mater. 22/2021). Advanced Materials, 2021, 33, 2170173. | 21.0 | 0 |