

# Frances A Houle

## List of Publications by Year in descending order

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33  
papers

1,571  
citations

471509

17  
h-index

395702

33  
g-index

34  
all docs

34  
docs citations

34  
times ranked

2520  
citing authors

#	ARTICLE	IF	CITATIONS
1	How the Hydrophobic Interface between a Perfluorosulfonic Acid Polymer and Water Vapor Controls Membrane Hydration. <i>ACS Applied Polymer Materials</i> , 2022, 4, 3247-3258.	4.4	3
2	Introduction to (photo)electrocatalysis for renewable energy. <i>Chemical Communications</i> , 2021, 57, 1540-1542.	4.1	3
3	Adaptive response by an electrolyte: resilience to electron losses in a dye-sensitized porous photoanode. <i>Chemical Science</i> , 2021, 12, 6117-6128.	7.4	7
4	Toward predictive permeabilities: Experimental measurements and multiscale simulation of methanol transport in Nafion. <i>Journal of Polymer Science</i> , 2021, 59, 594-613.	3.8	6
5	A purely kinetic description of the evaporation of water droplets. <i>Journal of Chemical Physics</i> , 2021, 154, 054501.	3.0	10
6	Ruthenium Dye Excitations and Relaxations in Natural Sunlight. <i>Journal of Physical Chemistry A</i> , 2021, 125, 4365-4372.	2.5	2
7	Practical challenges in the development of photoelectrochemical solar fuels production. <i>Sustainable Energy and Fuels</i> , 2020, 4, 985-995.	4.9	58
8	Emergent Degradation Phenomena Demonstrated on Resilient, Flexible, and Scalable Integrated Photoelectrochemical Cells. <i>Advanced Energy Materials</i> , 2020, 10, 2002706.	19.5	8
9	Ultrafast Relaxations in Ruthenium Polypyridyl Chromophores Determined by Stochastic Kinetics Simulations. <i>Journal of Physical Chemistry B</i> , 2020, 124, 5971-5985.	2.6	13
10	Permeation of CO <sub>2</sub> and N <sub>2</sub> through glassy poly(dimethyl phenylene) oxide under steady-state and presteady-state conditions. <i>Journal of Polymer Science</i> , 2020, 58, 1207-1228.	3.8	8
11	Using Nanoparticle X-ray Spectroscopy to Probe the Formation of Reactive Chemical Gradients in Diffusion-Limited Aerosols. <i>Journal of Physical Chemistry A</i> , 2019, 123, 6034-6044.	2.5	12
12	Reaction-Transport Coupling in a Nanostructured Porous Electrode. <i>Journal of Physical Chemistry C</i> , 2019, 123, 14459-14467.	3.1	6
13	Changes in Reactivity as Chemistry Becomes Confined to an Interface. The Case of Free Radical Oxidation of C <sub>30</sub> H <sub>62</sub> Alkane by OH. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 1053-1057.	4.6	27
14	The Technical and Energetic Challenges of Separating (Photo)Electrochemical Carbon Dioxide Reduction Products. <i>Joule</i> , 2018, 2, 381-420.	24.0	148
15	Predictive simulation of non-steady-state transport of gases through rubbery polymer membranes. <i>Polymer</i> , 2018, 134, 125-142.	3.8	12
16	Predicting Aerosol Reactivity Across Scales: from the Laboratory to the Atmosphere. <i>Environmental Science &amp; Technology</i> , 2018, 52, 13774-13781.	10.0	19
17	Swelling and Diffusion during Methanol Sorption into Hydrated Nafion. <i>Journal of Physical Chemistry B</i> , 2018, 122, 8255-8268.	2.6	16
18	Multiphase Mechanism for the Production of Sulfuric Acid from SO <sub>2</sub> by Criegee Intermediates Formed During the Heterogeneous Reaction of Ozone with Squalene. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 3504-3510.	4.6	18

#	ARTICLE	IF	CITATIONS
19	Pathways to electrochemical solar-hydrogen technologies. <i>Energy and Environmental Science</i> , 2018, 11, 2768-2783.	30.8	238
20	Hybrid Composite Coatings for Durable and Efficient Solar Hydrogen Generation under Diverse Operating Conditions. <i>Advanced Energy Materials</i> , 2017, 7, 1602791.	19.5	25
21	Diffusive confinement of free radical intermediates in the OH radical oxidation of semisolid aerosols. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 6814-6830.	2.8	38
22	Exploring Chemistry in Microcompartments Using Guided Droplet Collisions in a Branched Quadrupole Trap Coupled to a Single Droplet, Paper Spray Mass Spectrometer. <i>Analytical Chemistry</i> , 2017, 89, 12511-12519.	6.5	60
23	Aerosol Fragmentation Driven by Coupling of Acid-Base and Free-Radical Chemistry in the Heterogeneous Oxidation of Aqueous Citric Acid by OH Radicals. <i>Journal of Physical Chemistry A</i> , 2017, 121, 5856-5870.	2.5	29
24	Connecting the Elementary Reaction Pathways of Criegee Intermediates to the Chemical Erosion of Squalene Interfaces during Ozonolysis. <i>Environmental Science &amp; Technology</i> , 2017, 51, 13740-13748.	10.0	53
25	Colliding-Droplet Microreactor: Rapid On-Demand Inertial Mixing and Metal-Catalyzed Aqueous Phase Oxidation Processes. <i>Analytical Chemistry</i> , 2017, 89, 12494-12501.	6.5	25
26	Opportunities to improve the net energy performance of photoelectrochemical water-splitting technology. <i>Energy and Environmental Science</i> , 2016, 9, 803-819.	30.8	75
27	Particle suspension reactors and materials for solar-driven water splitting. <i>Energy and Environmental Science</i> , 2015, 8, 2825-2850.	30.8	344
28	JCAP Research on Solar Fuel Production at Light Sources. <i>Synchrotron Radiation News</i> , 2014, 27, 14-17.	0.8	26
29	Life-cycle net energy assessment of large-scale hydrogen production via photoelectrochemical water splitting. <i>Energy and Environmental Science</i> , 2014, 7, 3264-3278.	30.8	195
30	Ethics and the Welfare of the Physics Profession. <i>Physics Today</i> , 2004, 57, 42-46.	0.3	19
31	Use of Interferometric Lithography to Characterize the Spatial Resolution of a Photoresist Film. <i>Journal of Photopolymer Science and Technology</i> = [Fotoporima Konwakai Shi], 2003, 16, 373-379.	0.3	10
32	Simulation methods in kinetics courses. <i>Journal of Chemical Education</i> , 1981, 58, 405.	2.3	4
33	The nature of the bonding of Li <sup>+</sup> to H <sub>2</sub> O and NH <sub>3</sub> ; A <sub>3</sub> initio studies. <i>Chemical Physics</i> , 1976, 14, 461-468.	1.9	54