

Hassan A Tahini

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

57 papers	1,577 citations	23 h-index	38 g-index
60 ext. papers	2,081 ext. citations	9.8 avg, IF	5.2 L-index

#	Paper	IF	Citations
57	Metal oxide-based materials as an emerging family of hydrogen evolution electrocatalysts. <i>Energy and Environmental Science</i> , 2020 , 13, 3361-3392	35.4	151
56	Boosting Oxygen Evolution Reaction by Creating Both Metal Ion and Lattice-Oxygen Active Sites in a Complex Oxide. <i>Advanced Materials</i> , 2020 , 32, e1905025	24	122
55	Unusual synergistic effect in layered Ruddlesden-Popper oxide enables ultrafast hydrogen evolution. <i>Nature Communications</i> , 2019 , 10, 149	17.4	116
54	Electroreduction of CO ₂ to CO on a Mesoporous Carbon Catalyst with Progressively Removed Nitrogen Moieties. <i>ACS Energy Letters</i> , 2018 , 3, 2292-2298	20.1	78
53	Formation and Migration of Oxygen Vacancies in SrCoO ₃ and Their Effect on Oxygen Evolution Reactions. <i>ACS Catalysis</i> , 2016 , 6, 5565-5570	13.1	66
52	Borophene as a Promising Material for Charge-Modulated Switchable CO Capture. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 19825-19830	9.5	62
51	Interfacing BiVO with Reduced Graphene Oxide for Enhanced Photoactivity: A Tale of Facet Dependence of Electron Shuttling. <i>Small</i> , 2016 , 12, 5295-5302	11	56
50	p-Doped Graphene/Graphitic Carbon Nitride Hybrid Electrocatalysts: Unraveling Charge Transfer Mechanisms for Enhanced Hydrogen Evolution Reaction Performance. <i>ACS Catalysis</i> , 2016 , 6, 7071-7077 ^{13,1}	13.1	53
49	The controlled disassembly of mesostructured perovskites as an avenue to fabricating high performance nanohybrid catalysts. <i>Nature Communications</i> , 2017 , 8, 15553	17.4	52
48	Single-phase perovskite oxide with super-exchange induced atomic-scale synergistic active centers enables ultrafast hydrogen evolution. <i>Nature Communications</i> , 2020 , 11, 5657	17.4	49
47	Conductive Graphitic Carbon Nitride as an Ideal Material for Electrocatalytically Switchable CO ₂ Capture. <i>Scientific Reports</i> , 2015 , 5, 17636	4.9	48
46	Super-Exchange Interaction Induced Overall Optimization in Ferromagnetic Perovskite Oxides Enables Ultrafast Water Oxidation. <i>Small</i> , 2019 , 15, e1903120	11	43
45	Conductive Boron-Doped Graphene as an Ideal Material for Electrocatalytically Switchable and High-Capacity Hydrogen Storage. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 32815-32822	9.5	40
44	Mobile Polaronic States in HfMoO ₃ : An ab Initio Investigation of the Role of Oxygen Vacancies and Alkali Ions. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 10911-7	9.5	40
43	Vacancies and defect levels in III-V semiconductors. <i>Journal of Applied Physics</i> , 2013 , 114, 063517	2.5	37
42	The origin of low workfunctions in OH terminated MXenes. <i>Nanoscale</i> , 2017 , 9, 7016-7020	7.7	35
41	Self-Assembled Ruddlesden-Popper/Perovskite Hybrid with Lattice-Oxygen Activation as a Superior Oxygen Evolution Electrocatalyst. <i>Small</i> , 2020 , 16, e2001204	11	34

40	Pyrite-type ruthenium disulfide with tunable disorder and defects enables ultra-efficient overall water splitting. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 14222-14232	13	32
39	Understanding the high activity of mildly reduced graphene oxide electrocatalysts in oxygen reduction to hydrogen peroxide. <i>Materials Horizons</i> , 2019 , 6, 1409-1415	14.4	30
38	Charge Modulation in Graphitic Carbon Nitride as a Switchable Approach to High-Capacity Hydrogen Storage. <i>ChemSusChem</i> , 2015 , 8, 3626-31	8.3	27
37	Light-Induced Synergistic Multidefect Sites on TiO ₂ /SiO ₂ Composites for Catalytic Dehydrogenation. <i>ACS Catalysis</i> , 2019 , 9, 2674-2684	13.1	27
36	Boosting oxygen evolution reaction by activation of lattice-oxygen sites in layered Ruddlesden-Popper oxide. <i>EcoMat</i> , 2020 , 2, e12021	9.4	24
35	Point defect engineering strategies to retard phosphorous diffusion in germanium. <i>Physical Chemistry Chemical Physics</i> , 2013 , 15, 367-71	3.6	23
34	Versatile electrocatalytic processes realized by Ni, Co and Fe alloyed core coordinated carbon shells. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 12154-12165	13	22
33	Electrocatalytic Reduction of Carbon Dioxide to Methane on Single Transition Metal Atoms Supported on a Defective Boron Nitride Monolayer: First Principle Study. <i>Advanced Theory and Simulations</i> , 2019 , 2, 1800094	3.5	22
32	Computational design of two-dimensional nanomaterials for charge modulated CO ₂ /H ₂ capture and/or storage. <i>Energy Storage Materials</i> , 2017 , 8, 169-183	19.4	21
31	Hexagonal boron nitride and graphene in-plane heterostructures: An experimentally feasible approach to charge-induced switchable CO ₂ capture. <i>Chemical Physics</i> , 2016 , 478, 139-144	2.3	21
30	Tailored Brownmillerite Oxide Catalyst with Multiple Electronic Functionalities Enables Ultrafast Water Oxidation. <i>Chemistry of Materials</i> , 2021 , 33, 5233-5241	9.6	19
29	Charge-modulated permeability and selectivity in graphdiyne for hydrogen purification. <i>Molecular Simulation</i> , 2016 , 42, 573-579	2	18
28	Materials design for electrocatalytic carbon capture. <i>APL Materials</i> , 2016 , 4, 053202	5.7	18
27	Light, Catalyst, Activation: Boosting Catalytic Oxygen Activation Using a Light Pretreatment Approach. <i>ACS Catalysis</i> , 2017 , 7, 3644-3653	13.1	17
26	First-Principle Framework for Total Charging Energies in Electrocatalytic Materials and Charge-Responsive Molecular Binding at Gas-Surface Interfaces. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 10897-903	9.5	16
25	Sc and Nb dopants in SrCoO ₃ modulate electronic and vacancy structures for improved water splitting and SOFC cathodes. <i>Energy Storage Materials</i> , 2017 , 9, 229-234	19.4	13
24	Efficient Water Splitting Actualized through an Electrochemistry-Induced Hetero-Structured Antiperovskite/(Oxy)Hydroxide Hybrid. <i>Small</i> , 2020 , 16, e2006800	11	13
23	Ultrafast palladium diffusion in germanium. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 3832-3838	13	12

22	A molecular-level strategy to boost the mass transport of perovskite electrocatalyst for enhanced oxygen evolution. <i>Applied Physics Reviews</i> , 2021 , 8, 011407	17.3	12
21	Cooperative defect-enriched SiO ₂ for oxygen activation and organic dehydrogenation. <i>Journal of Catalysis</i> , 2019 , 376, 168-179	7.3	10
20	Antisites and anisotropic diffusion in GaAs and GaSb. <i>Applied Physics Letters</i> , 2013 , 103, 142107	3.4	10
19	Co-doping with antimony to control phosphorous diffusion in germanium. <i>Journal of Applied Physics</i> , 2013 , 113, 073704	2.5	10
18	In Operando Self-Healing of Perovskite Electrocatalysts: A Case Study of SrCoO ₃ for the Oxygen Evolution Reaction. <i>Particle and Particle Systems Characterization</i> , 2017 , 34, 1600280	3.1	9
17	Nitrogen Doped Carbon Nanosheets Coupled Nickel-Carbon Pyramid Arrays Toward Efficient Evolution of Hydrogen. <i>Advanced Sustainable Systems</i> , 2017 , 1, 1700032	5.9	9
16	Antisites in III-V semiconductors: Density functional theory calculations. <i>Journal of Applied Physics</i> , 2014 , 116, 023505	2.5	8
15	Defect Engineering in Graphene-Confined Single-Atom Iron Catalysts for Room-Temperature Methane Conversion. <i>Journal of Physical Chemistry C</i> , 2021 , 125, 12628-12635	3.8	8
14	A single-Pt-atom-on-Ru-nanoparticle electrocatalyst for CO-resilient methanol oxidation. <i>Nature Catalysis</i> , 2022 , 5, 231-237	36.5	8
13	Unveiling hidden charge density waves in single-layer NbSe ₂ by impurities. <i>Physical Review B</i> , 2018 , 98,	3.3	7
12	Charge-modulated CO ₂ capture. <i>Current Opinion in Electrochemistry</i> , 2017 , 4, 118-123	7.2	6
11	Electronic phase transitions under hydrostatic pressure in LaMnO ₃ (111) bilayers sandwiched between LaAlO ₃ . <i>Physical Review B</i> , 2016 , 93,	3.3	5
10	Unraveling the Factors Behind the Efficiency of Hydrogen Evolution in Endohedrally Doped C ₆₀ Structures via Ab Initio Calculations and Insights from Machine Learning Models. <i>Advanced Theory and Simulations</i> , 2019 , 2, 1800202	3.5	3
9	Facet-dependent carrier dynamics of cuprous oxide regulating the photocatalytic hydrogen generation. <i>Materials Advances</i> ,	3.3	3
8	Facile CO Oxidation on Oxygen-functionalized MXenes via the Mars-van Krevelen Mechanism. <i>ChemCatChem</i> , 2020 , 12, 1007-1012	5.2	2
7	Unveiling the role of carbon oxidation in irreversible degradation of atomically-dispersed FeN ₄ moieties for proton exchange membrane fuel cells. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 8721-8729 ¹³		2
6	Electrocatalysts: In Operando Self-Healing of Perovskite Electrocatalysts: A Case Study of SrCoO ₃ for the Oxygen Evolution Reaction (Part. Part. Syst. Charact. 4/2017). <i>Particle and Particle Systems Characterization</i> , 2017 , 34,	3.1	1
5	Charge driven metal-insulator transitions in LaMnO ₃ /SrTiO ₃ (111) superlattices. <i>Europhysics Letters</i> , 2017 , 118, 57001	1.6	1

4	Fermi Level Determination for Charged Systems via Recursive Density of States Integration. <i>Journal of Physical Chemistry Letters</i> , 2018 , 9, 4014-4019	6.4	1
3	Computational Materials Science: Discovering and Accelerating Future Technologies. <i>Advanced Theory and Simulations</i> , 2019 , 2, 1900023	3.5	0
2	Activating Inert MXenes for Hydrogen Evolution Reaction via Anchored Metal Centers. <i>Advanced Theory and Simulations</i> , 2100383	3.5	
1	Photocatalysis: Interfacing BiVO ₄ with Reduced Graphene Oxide for Enhanced Photoactivity: A Tale of Facet Dependence of Electron Shuttling (Small 38/2016). <i>Small</i> , 2016 , 12, 5232-5232	11	