Hassan A Tahini

List of Publications by Year in Descending Order

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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	A single-Pt-atom-on-Ru-nanoparticle electrocatalyst for CO-resilient methanol oxidation. *Nature Catalysis*, **2022**, 5, 231-237	36.5	8
56	Tailored Brownmillerite Oxide Catalyst with Multiple Electronic Functionalities Enables Ultrafast Water Oxidation. *Chemistry of Materials*, **2021**, 33, 5233-5241	9.6	19
55	Defect Engineering in Graphene-Confined Single-Atom Iron Catalysts for Room-Temperature Methane Conversion. *Journal of Physical Chemistry C*, **2021**, 125, 12628-12635	3.8	8
54	Unveiling the role of carbon oxidation in irreversible degradation of atomically-dispersed FeN4 moieties for proton exchange membrane fuel cells. *Journal of Materials Chemistry A*, **2021**, 9, 8721-8729	13	2
53	A molecular-level strategy to boost the mass transport of perovskite electrocatalyst for enhanced oxygen evolution. *Applied Physics Reviews*, **2021**, 8, 011407	17.3	12
52	Single-phase perovskite oxide with super-exchange induced atomic-scale synergistic active centers enables ultrafast hydrogen evolution. *Nature Communications*, **2020**, 11, 5657	17.4	49
51	Boosting oxygen evolution reaction by activation of lattice-oxygen sites in layered Ruddlesden-Popper oxide. *EcoMat*, **2020**, 2, e12021	9.4	24
50	Boosting Oxygen Evolution Reaction by Creating Both Metal Ion and Lattice-Oxygen Active Sites in a Complex Oxide. *Advanced Materials*, **2020**, 32, e1905025	24	122
49	Facile CO Oxidation on Oxygen-functionalized MXenes via the Mars-van Krevelen Mechanism. *ChemCatChem*, **2020**, 12, 1007-1012	5.2	2
48	Efficient Water Splitting Actualized through an Electrochemistry-Induced Hetero-Structured Antiperovskite/(Oxy)Hydroxide Hybrid. *Small*, **2020**, 16, e2006800	11	13
47	Metal oxide-based materials as an emerging family of hydrogen evolution electrocatalysts. *Energy and Environmental Science*, **2020**, 13, 3361-3392	35.4	151
46	Self-Assembled Ruddlesden-Popper/Perovskite Hybrid with Lattice-Oxygen Activation as a Superior Oxygen Evolution Electrocatalyst. *Small*, **2020**, 16, e2001204	11	34
45	Unusual synergistic effect in layered Ruddlesden-Popper oxide enables ultrafast hydrogen evolution. *Nature Communications*, **2019**, 10, 149	17.4	116
44	Understanding the high activity of mildly reduced graphene oxide electrocatalysts in oxygen reduction to hydrogen peroxide. *Materials Horizons*, **2019**, 6, 1409-1415	14.4	30
43	Pyrite-type ruthenium disulfide with tunable disorder and defects enables ultra-efficient overall water splitting. *Journal of Materials Chemistry A*, **2019**, 7, 14222-14232	13	32
42	Computational Materials Science: Discovering and Accelerating Future Technologies. *Advanced Theory and Simulations*, **2019**, 2, 1900023	3.5	0
41	Unraveling the Factors Behind the Efficiency of Hydrogen Evolution in Endohedrally Doped C60 Structures via Ab Initio Calculations and Insights from Machine Learning Models. *Advanced Theory and Simulations*, **2019**, 2, 1800202	3.5	3

40	Versatile electrocatalytic processes realized by Ni, Co and Fe alloyed core coordinated carbon shells. *Journal of Materials Chemistry A*, **2019**, 7, 12154-12165	13	22
39	Super-Exchange Interaction Induced Overall Optimization in Ferromagnetic Perovskite Oxides Enables Ultrafast Water Oxidation. *Small*, **2019**, 15, e1903120	11	43
38	Cooperative defect-enriched SiO2 for oxygen activation and organic dehydrogenation. *Journal of Catalysis*, **2019**, 376, 168-179	7.3	10
37	Light-Induced Synergistic Multidefect Sites on TiO2/SiO2 Composites for Catalytic Dehydrogenation. *ACS Catalysis*, **2019**, 9, 2674-2684	13.1	27
36	Electrocatalytic Reduction of Carbon Dioxide to Methane on Single Transition Metal Atoms Supported on a Defective Boron Nitride Monolayer: First Principle Study. *Advanced Theory and Simulations*, **2019**, 2, 1800094	3.5	22
35	Unveiling hidden charge density waves in single-layer NbSe2 by impurities. *Physical Review B*, **2018**, 98,	3.3	7
34	Electroreduction of CO2 to CO on a Mesoporous Carbon Catalyst with Progressively Removed Nitrogen Moieties. *ACS Energy Letters*, **2018**, 3, 2292-2298	20.1	78
33	Fermi Level Determination for Charged Systems via Recursive Density of States Integration. *Journal of Physical Chemistry Letters*, **2018**, 9, 4014-4019	6.4	1
32	Sc and Nb dopants in SrCoO3 modulate electronic and vacancy structures for improved water splitting and SOFC cathodes. *Energy Storage Materials*, **2017**, 9, 229-234	19.4	13
31	Light, Catalyst, Activation: Boosting Catalytic Oxygen Activation Using a Light Pretreatment Approach. *ACS Catalysis*, **2017**, 7, 3644-3653	13.1	17
30	Electrocatalysts: In Operando Self-Healing of Perovskite Electrocatalysts: A Case Study of SrCoO3 for the Oxygen Evolution Reaction (Part. Part. Syst. Charact. 4/2017). *Particle and Particle Systems Characterization*, **2017**, 34,	3.1	1
29	The origin of low workfunctions in OH terminated MXenes. *Nanoscale*, **2017**, 9, 7016-7020	7.7	35
28	Borophene as a Promising Material for Charge-Modulated Switchable CO Capture. *ACS Applied Materials & Interfaces*, **2017**, 9, 19825-19830	9.5	62
27	The controlled disassembly of mesostructured perovskites as an avenue to fabricating high performance nanohybrid catalysts. *Nature Communications*, **2017**, 8, 15553	17.4	52
26	In Operando Self-Healing of Perovskite Electrocatalysts: A Case Study of SrCoO3 for the Oxygen Evolution Reaction. *Particle and Particle Systems Characterization*, **2017**, 34, 1600280	3.1	9
25	Computational design of two-dimensional nanomaterials for charge modulated CO2/H2 capture and/or storage. *Energy Storage Materials*, **2017**, 8, 169-183	19.4	21
24	Charge-modulated CO2 capture. *Current Opinion in Electrochemistry*, **2017**, 4, 118-123	7.2	6
23	Nitrogen Doped Carbon Nanosheets Coupled NickelCarbon Pyramid Arrays Toward Efficient Evolution of Hydrogen. *Advanced Sustainable Systems*, **2017**, 1, 1700032	5.9	9

22	Charge driven metal-insulator transitions in LaMnO 3 |SrTiO 3 (111) superlattices. *Europhysics Letters*, **2017**, 118, 57001	1.6	1
21	p-Doped Graphene/Graphitic Carbon Nitride Hybrid Electrocatalysts: Unraveling Charge Transfer Mechanisms for Enhanced Hydrogen Evolution Reaction Performance. *ACS Catalysis*, **2016**, 6, 7071-7077	13.1	53
20	Formation and Migration of Oxygen Vacancies in SrCoO3 and Their Effect on Oxygen Evolution Reactions. *ACS Catalysis*, **2016**, 6, 5565-5570	13.1	66
19	Interfacing BiVO with Reduced Graphene Oxide for Enhanced Photoactivity: A Tale of Facet Dependence of Electron Shuttling. *Small*, **2016**, 12, 5295-5302	11	56
18	Electronic phase transitions under hydrostatic pressure in LaMnO3 (111) bilayers sandwiched between LaAlO3. *Physical Review B*, **2016**, 93,	3.3	5
17	Conductive Boron-Doped Graphene as an Ideal Material for Electrocatalytically Switchable and High-Capacity Hydrogen Storage. *ACS Applied Materials & Interfaces*, **2016**, 8, 32815-32822	9.5	40
16	Charge-modulated permeability and selectivity in graphdiyne for hydrogen purification. *Molecular Simulation*, **2016**, 42, 573-579	2	18
15	Materials design for electrocatalytic carbon capture. *APL Materials*, **2016**, 4, 053202	5.7	18
14	Mobile Polaronic States in α-MoO3: An ab Initio Investigation of the Role of Oxygen Vacancies and Alkali Ions. *ACS Applied Materials & Interfaces*, **2016**, 8, 10911-7	9.5	40
13	First-Principle Framework for Total Charging Energies in Electrocatalytic Materials and Charge-Responsive Molecular Binding at Gas-Surface Interfaces. *ACS Applied Materials & Interfaces*, **2016**, 8, 10897-903	9.5	16
12	Hexagonal boron nitride and graphene in-plane heterostructures: An experimentally feasible approach to charge-induced switchable CO 2 capture. *Chemical Physics*, **2016**, 478, 139-144	2.3	21
11	Photocatalysis: Interfacing BiVO4 with Reduced Graphene Oxide for Enhanced Photoactivity: A Tale of Facet Dependence of Electron Shuttling (Small 38/2016). *Small*, **2016**, 12, 5232-5232	11	
10	Charge Modulation in Graphitic Carbon Nitride as a Switchable Approach to High-Capacity Hydrogen Storage. *ChemSusChem*, **2015**, 8, 3626-31	8.3	27
9	Conductive Graphitic Carbon Nitride as an Ideal Material for Electrocatalytically Switchable CO2 Capture. *Scientific Reports*, **2015**, 5, 17636	4.9	48
8	Ultrafast palladium diffusion in germanium. *Journal of Materials Chemistry A*, **2015**, 3, 3832-3838	13	12
7	Antisites in III-V semiconductors: Density functional theory calculations. *Journal of Applied Physics*, **2014**, 116, 023505	2.5	8
6	Vacancies and defect levels in III–V semiconductors. *Journal of Applied Physics*, **2013**, 114, 063517	2.5	37
5	Antisites and anisotropic diffusion in GaAs and GaSb. *Applied Physics Letters*, **2013**, 103, 142107	3.4	10

4	Point defect engineering strategies to retard phosphorous diffusion in germanium. *Physical Chemistry Chemical Physics*, **2013**, 15, 367-71	3.6	23
3	Co-doping with antimony to control phosphorous diffusion in germanium. *Journal of Applied Physics* , **2013**, 113, 073704	2.5	10
2	Facet-dependent carrier dynamics of cuprous oxide regulating the photocatalytic hydrogen generation. *Materials Advances*,	3.3	3
1	Activating Inert MXenes for Hydrogen Evolution Reaction via Anchored Metal Centers. *Advanced Theory and Simulations*,2100383	3.5	