

# Zefeng Ren

## List of Publications by Year in descending order

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62  
papers

2,847  
citations

218677

26  
h-index

168389

53  
g-index

65  
all docs

65  
docs citations

65  
times ranked

2770  
citing authors

#	ARTICLE	IF	CITATIONS
1	Elementary photocatalytic chemistry on TiO <sub>2</sub> surfaces. <i>Chemical Society Reviews</i> , 2016, 45, 3701-3730.	38.1	288
2	Observation of Feshbach Resonances in the F + H <sub>2</sub> → HF + H Reaction. <i>Science</i> , 2006, 311, 1440-1443.	12.6	278
3	Stepwise Photocatalytic Dissociation of Methanol and Water on TiO <sub>2</sub> (110). <i>Journal of the American Chemical Society</i> , 2012, 134, 13366-13373.	13.7	244
4	Single Molecule Photocatalysis on TiO <sub>2</sub> Surfaces. <i>Chemical Reviews</i> , 2019, 119, 11020-11041.	47.7	212
5	Epitaxial Growth of Centimeter-Scale Single-Crystal MoS <sub>2</sub> Monolayer on Au(111). <i>ACS Nano</i> , 2020, 14, 5036-5045.	14.6	211
6	Site-specific photocatalytic splitting of methanol on TiO <sub>2</sub> (110). <i>Chemical Science</i> , 2010, 1, 575.	7.4	150
7	Breakdown of the Born-Oppenheimer Approximation in the F + <i>o</i> -D <sub>2</sub> → DF + D Reaction. <i>Science</i> , 2007, 317, 1061-1064.	12.6	149
8	Methyl Formate Production on TiO <sub>2</sub> (110), Initiated by Methanol Photocatalysis at 400 nm. <i>Journal of Physical Chemistry C</i> , 2013, 117, 5293-5300.	3.1	100
9	The Extent of Non-Born-Oppenheimer Coupling in the Reaction of Cl( <sup>2</sup> P) with <i>para</i> -H <sub>2</sub> . <i>Science</i> , 2008, 322, 573-576.	12.6	95
10	Band-Gap States of TiO <sub>2</sub> (110): Major Contribution from Surface Defects. <i>Journal of Physical Chemistry Letters</i> , 2013, 4, 3839-3844.	4.6	76
11	Probing the resonance potential in the F atom reaction with hydrogen deuteride with spectroscopic accuracy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 12662-12666.	7.1	75
12	HF( <i>v</i> = 3) forward scattering in the F + H <sub>2</sub> reaction: Shape resonance and slow-down mechanism. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 6227-6231.	7.1	72
13	Coverage Dependence of Methanol Dissociation on TiO <sub>2</sub> (110). <i>Journal of Physical Chemistry Letters</i> , 2015, 6, 3327-3334.	4.6	62
14	Effect of defects on photocatalytic dissociation of methanol on TiO <sub>2</sub> (110). <i>Chemical Science</i> , 2011, 2, 1980.	7.4	61
15	Strong Photon Energy Dependence of the Photocatalytic Dissociation Rate of Methanol on TiO <sub>2</sub> (110). <i>Journal of the American Chemical Society</i> , 2013, 135, 19039-19045.	13.7	58
16	Chiral Hybrid Copper(I) Halides for High Efficiency Second Harmonic Generation with a Broadband Transparency Window. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	13.8	53
17	Role of Pt Loading in the Photocatalytic Chemistry of Methanol on Rutile TiO <sub>2</sub> (110). <i>ACS Catalysis</i> , 2019, 9, 286-294.	11.2	39
18	Photocatalytic Dissociation of Ethanol on TiO <sub>2</sub> (110) by Near-Band-Gap Excitation. <i>Journal of Physical Chemistry C</i> , 2013, 117, 10336-10344.	3.1	37

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19	First-Principles Study of Methanol Oxidation into Methyl Formate on Rutile TiO <sub>2</sub> (110). Journal of Physical Chemistry C, 2014, 118, 19859-19868.	3.1	33
20	In Situ Studies on the Dissociation and Photocatalytic Reactions of CH <sub>3</sub> OH on TiO <sub>2</sub> Thin Film by Sum Frequency Generation Vibrational Spectroscopy. Journal of Physical Chemistry C, 2015, 119, 9798-9804.	3.1	33
21	Spectral Identification of Methanol on TiO <sub>2</sub> (110) Surfaces with Sum Frequency Generation in the C-H Stretching Region. Journal of Physical Chemistry C, 2015, 119, 23486-23494.	3.1	33
22	A double-stage pulsed discharge fluorine atom beam source. Review of Scientific Instruments, 2006, 77, 016102.	1.3	31
23	Elementary Chemical Reactions in Surface Photocatalysis. Annual Review of Physical Chemistry, 2018, 69, 451-472.	10.8	31
24	Probing Feshbach resonances in F+H <sub>2</sub> (j=1) → HF+H: Dynamical effect of single quantum H <sub>2</sub> -rotation. Journal of Chemical Physics, 2006, 125, 151102.	3.0	30
25	High resolution time-of-flight spectrometer for crossed molecular beam study of elementary chemical reactions. Review of Scientific Instruments, 2005, 76, 083107.	1.3	29
26	Surface photochemistry probed by two-photon photoemission spectroscopy. Energy and Environmental Science, 2012, 5, 6833.	30.8	27
27	Recombination of Formaldehyde and Hydrogen Atoms on TiO <sub>2</sub> (110). Journal of Physical Chemistry C, 2015, 119, 1170-1174.	3.1	26
28	Top-Seed Solution-Based Growth of Perovskite Cs <sub>3</sub> Bi <sub>2</sub> I <sub>9</sub> Single Crystal for High Performance X-ray Detection. ACS Photonics, 2022, 9, 641-651.	6.6	25
29	A Surface Femtosecond Two-Photon Photoemission Spectrometer for Excited Electron Dynamics and Time-Dependent Photochemical Kinetics. Chinese Journal of Chemical Physics, 2010, 23, 255-261.	1.3	19
30	Surface Photocatalysis-TPD Spectrometer for Photochemical Kinetics. Chinese Journal of Chemical Physics, 2012, 25, 507-512.	1.3	18
31	Origin of the Adsorption-State-Dependent Photoactivity of Methanol on TiO <sub>2</sub> (110). ACS Catalysis, 2021, 11, 2620-2630.	11.2	18
32	Alkoxylation Reaction of Alcohol on Silica Surfaces Studied by Sum Frequency Vibrational Spectroscopy. Journal of Physical Chemistry C, 2021, 125, 8638-8646.	3.1	17
33	Flexible high-resolution broadband sum-frequency generation vibrational spectroscopy for intrinsic spectral line widths. Journal of Chemical Physics, 2019, 150, 074702.	3.0	16
34	Full Quantum State Resolved Scattering Dynamics of the F+H <sub>2</sub> HF+H Reaction at 5.02 kJ/mol. Chinese Journal of Chemical Physics, 2006, 19, 93-95.	1.3	15
35	In Situ Studies on Temperature-Dependent Photocatalytic Reactions of Methanol on TiO <sub>2</sub> (110). Journal of Physical Chemistry C, 2019, 123, 9993-9999.	3.1	14
36	Controlling CH <sub>2</sub> dissociation on Ru(0001) through surface site blocking by adsorbed hydrogen. Journal of Catalysis, 2014, 320, 89-96.	6.2	13

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37	Methanol Adsorption on TiO <sub>2</sub> Film Studied by Sum Frequency Generation Vibrational Spectroscopy. Chinese Journal of Chemical Physics, 2015, 28, 11-16.	1.3	12
38	A broadband sum-frequency generation vibrational spectrometer to probe adsorbed molecules on nanoparticles. Surface Science, 2019, 689, 121459.	1.9	12
39	A review of dynamical resonances in Aâ€™%â€™%+â€™%â€™%BC chemical reactions. Reports on Progress in Physics, 2017, 80, 026401.	20.1	11
40	Active Species in Photocatalytic Reactions of Methanol on TiO <sub>2</sub> (110) Identified by Surface Sum Frequency Generation Vibrational Spectroscopy. Journal of Physical Chemistry C, 2019, 123, 13789-13794.	3.1	11
41	Full diagnostics and optimization of time resolution for time- and angle-resolved photoemission spectroscopy. Review of Scientific Instruments, 2021, 92, 033904.	1.3	10
42	Compact ultrahigh vacuum/high-pressure system for broadband infrared sum frequency generation vibrational spectroscopy studies. Review of Scientific Instruments, 2016, 87, 044101.	1.3	9
43	Photocatalytic Câ€™H Bond Activation of Toluene on Rutile TiO <sub>2</sub> (110). Journal of Physical Chemistry C, 2022, 126, 11963-11970.	3.1	9
44	Kinetics and Dynamics of Photocatalyzed Dissociation of Ethanol on TiO <sub>2</sub> (110). Chinese Journal of Chemical Physics, 2013, 26, 1-7.	1.3	8
45	CH <sub>2</sub> Stabilized at Steps on Ru(0001) by Coadsorbates. Journal of Physical Chemistry C, 2016, 120, 24724-24733.	3.1	8
46	Hydrophobic Modification of Silica Surfaces via Grafting Alkoxy Groups. ACS Applied Electronic Materials, 2021, 3, 1691-1698.	4.3	8
47	Deuterium Kinetic Isotope Effect in the Photocatalyzed Dissociation of Methanol on TiO <sub>2</sub> (110). Journal of Physical Chemistry C, 2018, 122, 26512-26518.	3.1	7
48	Ultrahigh sensitive transient absorption spectrometer. Review of Scientific Instruments, 2021, 92, 053002.	1.3	7
49	Chiral Hybrid Copper(I) Halides for High Efficiency Second Harmonic Generation with a Broadband Transparency Window. Angewandte Chemie, 0, , .	2.0	7
50	Adsorption Structure and Coverage-Dependent Orientation Analysis of Sub-Monolayer Acetonitrile on TiO <sub>2</sub> (110). Journal of Physical Chemistry C, 2019, 123, 17915-17924.	3.1	6
51	Spatially heterogeneous ultrafast interfacial carrier dynamics of 2D-MoS <sub>2</sub> flakes. Materials Today Physics, 2021, 21, 100506.	6.0	6
52	Valence Band of Rutile TiO <sub>2</sub> (110) Investigated by Polarized-Light-Based Angle-Resolved Photoelectron Spectroscopy. Journal of Physical Chemistry Letters, 2022, 13, 2299-2305.	4.6	6
53	Femtosecond time-resolved spectroscopic photoemission electron microscopy for probing ultrafast carrier dynamics in heterojunctions. Chinese Journal of Chemical Physics, 2019, 32, 399-405.	1.3	5
54	Anisotropic dâ€™d Transition in Rutile TiO <sub>2</sub> . Journal of Physical Chemistry Letters, 2021, 12, 10515-10520.	4.6	5

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55	High Resolution Crossed Beams Scattering Study of the F+HDDF+H Reaction. Chinese Journal of Chemical Physics, 2009, 22, 551-555.	1.3	3
56	Characterization of the Excited State on Methanol/TiO <sub>2</sub> (110) Interface. Chinese Journal of Chemical Physics, 2015, 28, 123-127.	1.3	3
57	Fundamental Processes in Surface Photocatalysis on TiO <sub>2</sub> . Green Chemistry and Sustainable Technology, 2016, , 361-416.	0.7	2
58	Efficient generation of narrowband picosecond pulses from a femtosecond laser. Review of Scientific Instruments, 2021, 92, 083001.	1.3	2
59	State-to-State Dynamical Research in the F+H <sub>2</sub> Reaction System. Springer Theses, 2014, , .	0.1	2
60	Dynamical Resonances in F+H <sub>2</sub> Reactions. Springer Theses, 2014, , 33-64.	0.1	0
61	The Non-adiabatic Effects in F(2P)+D <sub>2</sub> <sup>+</sup> DF+D. Springer Theses, 2014, , 65-76.	0.1	0
62	Hydrogen Atom Rydberg Tagging Time-of-Flight Crossed Molecular Beam Apparatus. Springer Theses, 2014, , 9-32.	0.1	0