Publications in Peer-Reviewed Journals

*Spectroscopy & Dynamics in the Condensed Phases (2011–now)*

◆ 2018 (--)

[51] DOI: 10.1063/1674-0068/31/cjcp1803044
Location Effect in a Photocatalytic Hybrid System of Metal–Organic Framework Interfaced with Semiconductor Nanoparticles
Q.-C. Shang, X.-Z. Fang, H.-L. Jiang, and Q. Zhang*

[50] DOI: 10.1002/anie.201713102
Experimental Identification of Ultrafast Reverse Hole Transfer at the Interface of the Photoexcited Methanol/Graphitic Carbon Nitride System
Z.-W. Chen, Q. Zhang*, and Y. Luo*

[49] DOI: 10.1021/acs.jpcc.7b12305
Graphene Grown on Anatase-TiO₂ Nanosheets: Enhanced Photocatalytic Activity on Basis of a Well-Controlled Interface

[48] DOI: 10.1021/acs.jpclett.7b00719
Ce³⁺-Doping to Modulate Photoluminescence Kinetics for Efficient CsPbBr₃ Nanocrystals Based Light-Emitting Diodes
Journal of the American Chemical Society 2018, 140(10), 3626–3634.

[47] DOI: 10.1021/jacs.8b00719
Optically Switchable Photocatalysis in Ultrathin Black Phosphorus Nanosheets
Journal of the American Chemical Society 2018, 140(9), 3474–3480.

[46] DOI: 10.1021/jacs.7b0997
Oxygen-Vacancy-Mediated Exciton Dissociation in BiOBr for Boosting Charge-Carrier-Involved Molecular Oxygen Activation
Publications in Peer-Reviewed Journals


[45] DOI: 10.1002/adma.201705112
Single Pt Atoms Confined into a Metal–Organic Framework for Efficient Photocatalysis
X.-Z. Fang (eq), Q.-C. Shang (eq), Y. Wang (eq), L. Jiao, T. Yao, Y.-F. Li, Q. Zhang, Y. Luo, and H.-L. Jiang*
Advanced Materials 2018, 30(7), 1705112.

[44] DOI: 10.1063/1674-0068/31/cjcp1710196
Mechanistic Insights into the Fluorescence Quenching of Rhodamine 6G by Graphene Oxide
L. Chen, L. Zhang, S.-L. Jiang, and Q. Zhang*

◆ 2017 (8)

[43] DOI: 10.1021/acs.jpclett.7b02449
Impact of Element Doping on Photoexcited Electron Dynamics in CdS Nanocrystals
L. Zhang, Q. Zhang*, and Y. Luo*

[42] DOI: 10.1002/cptc.201700051
Determining the Charge-Transfer Direction in a p-n Heterojunction BiOCl/g-C3N4 Photocatalyst by Ultrafast Spectroscopy
Z.-W. Chen, Q. Zhang*, and Y. Luo*

[41] DOI: 10.1021/acs.jpclett.7b01083
Great Disparity in Photoluminescence Quantum Yields of Colloidal CsPbBr3 Nanocrystals with Varied Shape: The Effect of Crystal Lattice Strain

[40] DOI: 10.1039/c7pp00044h
Proton-Coupled Charge-Transfer Reactions and Photoacidity of N,N-Dimethyl-3-Arylpropan-1-Ammonium Chloride Salts
T. M. Safko, S.-L. Jiang, L. Zhang, Q. Zhang, and R. G. Weiss*
Photochemical & Photobiological Sciences 2017, 16(6), 972–984.

[39] DOI: 10.1021/jacs.7b02290
Defect-Mediated Electron–Hole Separation in One-Unit-Cell ZnIn2S4 Layers for Boosted
Publications in Peer-Reviewed Journals

Solar-Driven CO₂ Reduction
Journal of the American Chemical Society 2017, 139(22), 7586–7594.

[38] DOI: 10.1039/C7SC00307B
Insights into the Excitonic Processes in Polymeric Photocatalysts
Chemical Science 2017, 8(5), 4087–4092.

[37] DOI: 10.1039/c7cp00973a
Interfacially Al-Doped ZnO Nanowires: Greatly-Enhanced Near Band Edge Emission through Suppressed Electron–Phonon Coupling and Confined Optical Field

[36] DOI: 10.1063/1674-0068/30/cjcp1611204
Surface Plasmon Assisted Directional Rayleigh Scattering

◆ 2016 (10)

[35] DOI: 10.1021/acs.jpcl.6b01903
Retrieving the Rate of Reverse Intersystem Crossing from Ultrafast Spectroscopy
J.-H. Hu, Q. Zhang*, and Y. Luo*

[34] DOI: 10.1002/cctc.201600504
In Situ Integration of a Metallic 1T-MoS₂/CdS Heterostructure as a Means to Promote Visible-Light-Driven Photocatalytic Hydrogen Evolution
Q. Liu (eq), Q.-C. Shang (eq), A. Khalil (eq), Q. Fang, S.-M. Chen, Q. He, T. Xiang, D.-B. Liu, Q. Zhang*, Y. Luo, and L. Song*

[33] DOI: 10.1002/adma.201601413
Enhanced Singlet Oxygen Generation in Oxidized Graphitic Carbon Nitride for Organic Synthesis
H. Wang (eq), S.-L. Jiang (eq), S.-C. Chen, D.-D. Li, X.-D. Zhang*, W. Shao, X.-S. Sun, J.-F. Xie,
Publications in Peer-Reviewed Journals

Z. Zhao, Q. Zhang*, Y.-P. Tian, and Y. Xie*
Advanced Materials 2016, 28(32), 6940–6945.

[32] DOI: 10.1002/anie.201603990
Boosting Photocatalytic Hydrogen Production of a Metal–Organic Framework Decorated with Platinum Nanoparticles: The Platinum Location Matters

[31] DOI: 10.1017/hpl.2016.23
Probing the Ultrafast Dynamics in Nanomaterial Complex Systems by Femtosecond Transient Absorption Spectroscopy
Q. Zhang* and Y. Luo*

[30] DOI: 10.1021/acscatal.6b00913
Insight into Electrocatalysts as Co-Catalysts in Efficient Photocatalytic Hydrogen Evolution
ACS Catalysis 2016, 6(7), 4253–4257.

[29] DOI: 10.1021/jacs.6b02532
Unraveling Surface Plasmon Decay in Core–Shell Nanostructures toward Broadband Light-Driven Catalytic Organic Synthesis

[28] DOI: 10.1002/anie.201602543
Enhanced Photoexcited Carrier Separation in Oxygen-Doped ZnIn$_2$S$_4$ Nanosheets for Hydrogen Evolution

[27] DOI: 10.1002/adma.201505281
Single-Atom Pt as Co-Catalyst for Enhanced Photocatalytic H$_2$ Evolution
Publications in Peer-Reviewed Journals

and Y. Xie


[26] DOI: 10.1002/anie.201510642
Oxyhydroxide Nanosheets with Highly Efficient Electron–Hole Pair Separation for Hydrogen Evolution

◆ 2015 (12)

[25] DOI: 10.1021/jacs.5b08773
Journal of the American Chemical Society 2015, 137(42), 13440–13443. (Highly Cited Paper)

[24] DOI: 10.1038/ncomms9647
Molecular Co-Catalyst Accelerating Hole Transfer for Enhanced Photocatalytic H₂ Evolution
Nature Communications 2015, 6, 8647.

[23] DOI: 10.1002/smll.201501611
Rupturing C₆₀ Molecules into Graphene-Oxide-Like Quantum Dots: Structure, Photoluminescence, and Catalytic Application
Small 2015, 11(39), 5296–5304.

[22] DOI: 10.1002/adma.201502748
A New Cubic Phase for a NaYF₄ Host Matrix Offering High Upconversion Luminescence Efficiency

[21] DOI: 10.1002/anie.201505442
A Unique Ternary Semiconductor–(Semiconductor/Metal) Nano-Architecture for Efficient Photocatalytic Hydrogen Evolution

[20] DOI: 10.1039/c5ra14204k
Remarkable Enhancement of Photovoltaic Performance of ZnO/CdTe Core–Shell Nanorod Array Solar Cells through Interface Passivation with a TiO₂ Layer
RSC Advances 2015, 5(88), 71883–71889.

[19] DOI: 10.1002/anie.201503410
Atomic-Layer-Conﬁned Doping for Atomic-Level Insights into Visible-Light Water Splitting
F.-C. Lei (eq), L. Zhang (eq), Y.-F. Sun*, L. Liang, K.-T. Liu, J.-Q. Xu, Q. Zhang*, B.-C. Pan, Y. Luo, and Y. Xie*

[18] DOI: 10.1021/jacs.5b03612
Visible-Light Photoexcited Electron Dynamics of Scandium Endohedral Metallofullerenes: The Cage Symmetry and Substituent Effects
Journal of the American Chemical Society 2015, 137(27), 8769–8774.

[17] DOI: 10.1039/c5cs00064e
Steering Charge Kinetics in Photocatalysis: Intersection of Materials Syntheses, Characterization Techniques and Theoretical Simulations
S. Bai, J. Jiang, Q. Zhang, and Y.-J. Xiong*
Chemical Society Reviews 2015, 44(10), 2893–2939. (Back Cover) (Highly Cited Paper)

[16] DOI: 10.1039/C5CP00323G
Bringing Light into the Dark Triplet Space of Molecular Systems
Physical Chemistry Chemical Physics 2015, 17(19), 13129–13136.

Efficient and Tunable Fluorescence Energy Transfer via Long-Lived Polymer Excitons
Publications in Peer-Reviewed Journals

Polymer Chemistry 2015, 6, 1698–1702.

[14] DOI: 10.1002/marc.201400529
Polymerization-Enhanced Intersystem Crossing: New Strategy to Achieve Long-Lived Excitons
X.-X. Sun, X.-J. Wang, X.-Y. Li, J. Ge, Q. Zhang*, J. Jiang*, and G.-Q. Zhang*

◆ 2014 (6)

A Unique Semiconductor–Metal–Graphene Stack Design to Harness Charge Flow for
Photocatalysis
S. Bai (eq), J. Ge (eq), L.-L. Wang, M. Gong, M.-S. Deng, Q. Kong, L. Song, J. Jiang*, Q. Zhang*,
Y. Luo, Y. Xie, and Y.-J. Xiong*
Advanced Materials 2014, 26(32), 5689–5695. (Inside Front Cover)

[12] DOI: 10.1002/adma.201400428
Integration of an Inorganic Semiconductor with a Metal–Organic Framework: A Platform for
Enhanced Gaseous Photocatalytic Reactions
Y. Xie, and Y.-J. Xiong*
Advanced Materials 2014, 26(28), 4783–4788. (Inside Back Cover) (Highly Cited Paper)

Designing p-Type Semiconductor–Metal Hybrid Structures for Improved Photocatalysis
Y. Luo, and Y.-J. Xiong*

Fluorescent Switch for Fast and Selective Detection of Mercury (II) Ions in Vitro and in Living
Cells and a Simple Device for Its Removal
Talanta 2014, 125, 204–209.

[09] DOI: 10.1039/C3TA14539E
Improving the Photovoltaic Performance of Solid-State ZnO/CdTe Core–Shell Nanorod Array
Solar Cells Using a Thin CdS Interfacial Layer
Publications in Peer-Reviewed Journals

X.-P. Wang*


[08] DOI: 10.1002/anie.201309660

Tunable Oxygen Activation for Catalytic Organic Oxidation: Schottky Junction versus Plasmonic Effects


◆ 2013–2011 (7)

[07] DOI: 10.1021/ja40711or

The Realistic Domain Structure of As-Synthesized Graphene Oxide from Ultrafast Spectroscopy

Journal of the American Chemical Society 2013, 135(33), 12468–12474.

[06] DOI: 10.1063/1674-0068/26/03/252-258

How Graphene Oxide Quenches Fluorescence of Rhodamine 6G

Chinese Journal of Chemical Physics 2013, 26(3), 252–258. (Most Downloaded Paper)

[05] DOI: 10.1103/PhysRevLett.109.253901

Coherent Random Fiber Laser Based on Nanoparticles Scattering in the Extremely Weakly Scattering Regime


[04] DOI: 10.1016/j.optcom.2012.05.048

Random Fiber Laser of POSS Solution-Filled Hollow Optical Fiber by End Pumping


[03] DOI: 10.1002/jrs.2923

Phase-Locking of Two Independent Degenerate Coherent Anti-Stokes Raman Scattering Processes: Concept, Proposed All-Optical Implementation, and Potential Applications
Q. Zhang*
Publications in Peer-Reviewed Journals


[02] DOI: 10.1364/OL.36.001902
Optical Amplification of Eu(TTA)$_3$Phen Solution-Filled Hollow Optical Fiber

[01] DOI: 10.1364/OE.19.004991
Laser-Launched Evanescent Surface Plasmon Polariton Field Utilized as a Direct Coherent Pumping Source to Generate Emitted Nonlinear Four-Wave Mixing Radiation
Q. Zhang*, K. Lin, and Y. Luo
Optics Express 2011, 19(6), 4991–5001.
Publications in Peer-Reviewed Journals

*Spectroscopy & Dynamics in the Gas Phase (selected)*

[26] DOI: 10.1016/j.jms.2015.05.002
The Laser-Induced Fluorescence Spectroscopy of Yttrium Monosulfide
J.-Z. Zang, Q. Zhang*, D.-P. Zhang, C.-B. Qin, Q. Zhang, and Y. Chen*
Journal of Molecular Spectroscopy 2015, 313(1), 49–53.

Note: Vibrationally Mediated Photodissociation of Carbon Dioxide Cation
Journal of Chemical Physics 2013, 139(16), 166101.

Note: Observation of a New Electronically Excited State of Cobalt Monoxide
Journal of Chemical Physics 2012, 137(20), 206101.

[23] DOI: 10.1039/c2cp22385f
Mode Specific Photodissociation of CS$_2$ via the A$^2\Pi_u$ State: A Time-Sliced Velocity Map Imaging Study
C.-M. Zhang, J.-L. Li, Q. Zhang*, Y. Chen*, C.-S. Huang*, and X.-M. Yang

[22] DOI: 10.1063/1.3671368
Multiphoton Dissociative Ionization of Tert-Pentyl Bromide Near 265 nm
R. Mao, Q. Zhang*, J.-Z. Zang, C. He, M. Chen, and Y. Chen*
Journal of Chemical Physics 2011, 135(24), 244302.

Note: Single-Ultraviolet-Photon Dissociation Dynamics of CS$_2$'(X$^3\Pi_g$) in 227–243 nm Revealed by Time-Sliced Velocity Map Imaging
J.-L. Li, C.-M. Zhang, Q. Zhang*, Y. Chen*, C.-S. Huang*, and X.-M. Yang
Journal of Chemical Physics 2011, 135(11), 116102.

[20] DOI: 10.1063/1.3567071
[1 + 1] Photodissociation of CS$_2$'(X$^3\Pi_g$) via the Vibrationally Mediated B$^5\Sigma_u^+$ State: Multichannels Exhibiting and Mode Specific Dynamics
J.-L. Li, C.-M. Zhang, Q. Zhang*, Y. Chen*, C.-S. Huang*, and X.-M. Yang
Journal of Chemical Physics 2011, 134(11), 114309.
Publications in Peer-Reviewed Journals

[19] DOI: 10.1063/1.3480395
Reaction of C₂(a'Π_u) with Methanol: Temperature Dependence and Deuterium Isotope Effect
R.-Z. Hu, Q. Zhang*, and Y. Chen*
*Journal of Chemical Physics 2010, 133(11), 114306.

[18] DOI: 10.1016/j.cplett.2010.05.073
Spectroscopy of Nickel Monosulfide in 450–560 nm by Laser-Induced Fluorescence and Dispersed Fluorescence Techniques
L. Wang, J.-F. Zhen, J.-Q. Gao, Q. Zhang*, and Y. Chen*

[17] DOI: 10.1063/1.3400070
Reactions of C₂(a'Π_u) with Selected Saturated Alkanes: A Temperature Dependence Study
R.-Z. Hu, Q. Zhang*, and Y. Chen*
*Journal of Chemical Physics 2010, 132(16), 164312.

Absorption Spectra of AsH₂ Radical in 435–510 nm by Cavity Ringdown Spectroscopy
D.-F. Zhao, C.-B. Qin, M. Ji, Q. Zhang, and Y. Chen*

Photolysis of N-Butyl Nitrite and Isoamyl Nitrite at 355 nm: A Time-Resolved Fourier Transform Infrared Emission Spectroscopy and Ab Initio Study
M. Ji, J.-F. Zhen, Q. Zhang*, and Y. Chen*
*Journal of Chemical Physics 2009, 130(17), 174314.

[14] DOI: 10.1063/1.3103645
Laser-Induced Atomic Fragment Fluorescence Spectroscopy: A Facile Technique for Molecular Spectroscopy of Spin-Forbidden States
Q. Zhang*, Y. Chen, and M. Keil*

[13] DOI: 10.1016/j.jms.2009.03.004
Laser-Induced Fluorescence Spectroscopy of FeS in the Visible Region
S.-H. Zhang, J.-F. Zhen, Q. Zhang, and Y. Chen*

[12] DOI: 10.1063/1.3000006
On the Photofragmentation of SF₂⁺: Experimental Evidence for a Predissociation Channel
Q. Zhang*, R. Mao, and Y. Chen
Publications in Peer-Reviewed Journals


In Situ Accurate Determination of the Zero Time Delay between Two Independent Ultrashort Laser Pulses by Observing the Oscillation of an Atomic Excited Wave Packet
Q. Zhang* and J. W. Hepburn

[10] DOI: 10.1016/j.jms.2008.06.014
The Laser-Induced Fluorescence Study of A^\Sigma^-\rightarrow X^\Pi_i Band System of CuS
S.-H. Zhang, J.-F. Zhen, Q. Zhang, and Y. Chen*

[09] DOI: 10.1103/PhysRevA.78.021403
Observation of Above-Threshold Dissociation of Na_2^+ in Intense Laser Fields
Q. Zhang*, J. W. Hepburn, and M. Shapiro
*Physical Review A (Rapid Communications)* 2008, 78(2), 021403(R).

[08] DOI: 10.1063/1.2889382
Observation of the 5p Rydberg States of Sulfur Difluoride Radical by Resonance-Enhanced Multiphoton Ionization Spectroscopy
Q. Zhang*, X.-G. Zhou, Q.-X. Li, S.-Q. Yu, and X.-X. Ma
*Journal of Chemical Physics* 2008, 128(14), 144306.

[07] DOI: 10.1063/1.2168153
Threshold Ion-Pair Production Spectroscopy of HCN
Q. J. Hu, Q. Zhang, and J. W. Hepburn*
*Journal of Chemical Physics* 2006, 124(7), 074310.

[06] DOI: 10.1364/JOSAB.20.002255
Coherent Control and Phase Locking of Two-Photon Processes in the Nanosecond Domain
Q. Zhang, M. Keil*, and M. Shapiro

[05] DOI: 10.1016/S0568-2048(00)00136-5
Study on the Resonance-Enhanced Multiphoton Ionization of the 4s and C States of SF_2 Radicals

[04] DOI: 10.1016/S0009-2614(99)00368-1
Publications in Peer-Reviewed Journals

A New Excited Electronic State of SF$_2$ Radical Observed by Resonance-Enhanced Multiphoton Ionization

[03] DOI: 10.1117/12.308412
Resonance-Enhanced Multiphoton Ionization Spectroscopy of SF$_2$ Radical

[02] DOI: 10.1021/jp981769p
Electronic Band Systems of SF$_2$ Radical Observed by Resonance-Enhanced Multiphoton Ionization
Q.-X. Li, J.-N. Shu, Q. Zhang, S.-Q. Yu, L.-M. Zhang, C.-X. Chen, and X.-X. Ma*

Kinetic Studies on State–State Coupling and Collisional Quenching of Excited Sulfur Dioxide
Q. Zhang, C.-X. Chen*, S.-Q. Yu, and X.-X. Ma