# Wei Ren

List of Publications by Year
in descending order

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|---|---|---|---|
| 109 papers | 2,932 citations | 126858 33 h-index | 206029 48 g-index |
| 111 all docs | 111 docs citations | 111 times ranked | 1864 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Dual-comb Spectroscopy for Laminar Premixed Flames with a Free-running Fiber Laser. Combustion Science and Technology, 2022, 194, 2523-2538. | 1.2 | 8 |
| 2 | On the Quantification of Boundary Layer Effects on Flame Temperature Measurements Using Line-of-sight Absorption Spectroscopy. Combustion Science and Technology, 2022, 194, 3259-3276. | 1.2 | 3 |
| 3 | Transient tracer gas measurements: Development and evaluation of a fastâ€response SF <sub>6</sub> measuring system based on quartzâ€enhanced photoacoustic spectroscopy. Indoor Air, 2022, 32, . | 2.0 | 4 |
| 4 | Development of an infrared laser absorption sensor for non-intrusive gas temperature measurements. Energetic Materials Frontiers, 2022, 3, 10-17. | 1.3 | 1 |
| 5 | Mid-infrared CO2 sensor with blended absorption features for non-uniform laminar premixed flames. Applied Physics B: Lasers and Optics, 2022, 128, 1. | 1.1 | 11 |
| 6 | Laser sensors for energy systems and process industries: Perspectives and directions. Progress in Energy and Combustion Science, 2022, 91, 100997. | 15.8 | 56 |
| 7 | Hybrid constraint multi-line absorption spectroscopy for non-uniform thermochemical measurements in axisymmetric laminar and jet flames. Optics and Lasers in Engineering, 2022, 154, 107014. | 2.0 | 4 |
| 8 | Trace gas detection in a hollow-core antiresonant fiber with heterodyne phase-sensitive dispersion spectroscopy. Sensors and Actuators B: Chemical, 2022, 363, 131774. | 4.0 | 12 |
| 9 | Dual-comb photothermal spectroscopy. Nature Communications, 2022, 13, 2181. | 5.8 | 34 |
| 10 | Wavelength-modulation dispersion spectroscopy of NO with heterodyne phase-sensitive detection. Optics Letters, 2022, 47, 2899. | 1.7 | 7 |
| 11 | A CGA-ONIOM-DFT framework for accurate and efficient determination of thermodynamics and Kinetics: Case study of cyclopentane reaction with hydroxyl radical. Chemical Physics Letters, 2022, 801, 139714. | 1.2 | 0 |
| 12 | Measurement of temperature-dependent line parameters of ammonia transitions near 1103 cmâ¯1. Journal of Quantitative Spectroscopy and Radiative Transfer, 2022, 288, 108269. | 1.1 | 4 |
| 13 | High-temperature ammonia detection using heterodyne phase-sensitive dispersion spectroscopy at 9.06ÂÎ¼m. Fuel, 2022, 325, 124852. | 3.4 | 6 |
| 14 | A portable laser absorption sensor for quantitative measurement of ambient temperature and humidity. , 2022, , . | | 0 |
| 15 | Photothermal multi-species detection in a hollow-core fiber with frequency-division multiplexing. Sensors and Actuators B: Chemical, 2022, 369, 132333. | 4.0 | 8 |
| 16 | Shock tube measurement of NO time-histories in nitromethane pyrolysis using a quantum cascade laser at 5.26â€Âµm. Proceedings of the Combustion Institute, 2021, 38, 1745-1752. | 2.4 | 8 |
| 17 | Tunable diode laser-based two-line thermometry: a noncontact thermometer for active body temperature measurement. Applied Optics, 2021, 60, 7036. | 0.9 | 3 |
| 18 | Tellurite Hollow-Core Antiresonant Fiber-Coupled Quantum Cascade Laser Absorption Spectroscopy. Journal of Lightwave Technology, 2021, 39, 5662-5668. | 2.7 | 16 |

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|---|---|---|---|
| 19 | Heterodyne interferometric photothermal spectroscopy for gas detection in a hollow-core fiber. Sensors and Actuators B: Chemical, 2021, 346, 130528. | 4.0 | 27 |
| 20 | Multispectral infrared absorption spectroscopy for quantitative temperature measurements in axisymmetric laminar premixed sooting flames. Case Studies in Thermal Engineering, 2021, 28, 101575. | 2.8 | 8 |
| 21 | Accurate temperature prediction with small absorption spectral data enabled by transfer machine learning. Optics Express, 2021, 29, 40699. | 1.7 | 6 |
| 22 | Mid-infrared cavity-enhanced absorption sensor for ppb-level N<sub>2</sub>O detection using an injection-current-modulated quantum cascade laser. Optics Express, 2021, 29, 41634. | 1.7 | 8 |
| 23 | Sub-ppm CO detection in a sub-meter-long hollow-core negative curvature fiber using absorption spectroscopy at 2.3 Î¼m. Sensors and Actuators B: Chemical, 2020, 303, 127238. | 4.0 | 43 |
| 24 | Exploring the pyrolysis chemistry of prototype aromatic ester phenyl formate: Reaction pathways, thermodynamics and kinetics. Combustion and Flame, 2020, 211, 337-346. | 2.8 | 15 |
| 25 | Time-resolved characterization of non-thermal plasma-assisted photocatalytic removal of nitric oxide. Journal Physics D: Applied Physics, 2020, 53, 01LT02. | 1.3 | 4 |
| 26 | Silica Hollow-Core Negative Curvature Fibers Enable Ultrasensitive Mid-Infrared Absorption Spectroscopy. Journal of Lightwave Technology, 2020, 38, 2067-2072. | 2.7 | 35 |
| 27 | An improved study of the uniformity of laminar premixed flames using laser absorption spectroscopy and CFD simulation. Experimental Thermal and Fluid Science, 2020, 112, 110013. | 1.5 | 28 |
| 28 | Theoretical and Experimental Study of Heterodyne Phase-Sensitive Dispersion Spectroscopy with an Injection-Current-Modulated Quantum Cascade Laser. Sensors, 2020, 20, 6176. | 2.1 | 5 |
| 29 | Rapid field measurement of ventilation rate using a quartz-enhanced photoacoustic SF<sub>6</sub> gas sensor. Measurement Science and Technology, 2020, 31, 085105. | 1.4 | 10 |
| 30 | MHz-rate scanned-wavelength direct absorption spectroscopy using a distributed feedback diode laser at 2.3ÂÂµm. Optics and Laser Technology, 2020, 130, 106344. | 2.2 | 31 |
| 31 | MIR-Pump NIR-Probe Fiber-Optic Photothermal Spectroscopy With Background-Free First Harmonic Detection. IEEE Sensors Journal, 2020, 20, 12709-12715. | 2.4 | 35 |
| 32 | Direct dynamics of a large complex hydrocarbon reaction system: The reaction of OH with exo-tricyclodecane (the main component of Jet Propellant-10). Combustion and Flame, 2020, 216, 82-91. | 2.8 | 8 |
| 33 | Water Catalysis of the Reaction of Methanol with OH Radical in the Atmosphere is Negligible. Angewandte Chemie, 2020, 132, 10918-10922. | 1.6 | 10 |
| 34 | Water Catalysis of the Reaction of Methanol with OH Radical in the Atmosphere is Negligible. Angewandte Chemie - International Edition, 2020, 59, 10826-10830. | 7.2 | 13 |
| 35 | Multipass-assisted dual-comb gas sensor for multi-species detection using a free-running fiber laser. Applied Physics B: Lasers and Optics, 2020, 126, 1. | 1.1 | 10 |
| 36 | Anharmonic kinetics of the cyclopentane reaction with hydroxyl radical. Chemical Science, 2020, 11, 2511-2523. | 3.7 | 20 |

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|---|---|---|---|
| 37 | Active modulation of intracavity laser intensity with the Poundâ€“Dreverâ€“Hall locking for photoacoustic spectroscopy. Optics Letters, 2020, 45, 1148. | 1.7 | 14 |
| 38 | Mid-infrared heterodyne phase-sensitive dispersion spectroscopy in flame measurements. Proceedings of the Combustion Institute, 2019, 37, 1329-1336. | 2.4 | 20 |
| 39 | Kinetic mechanism for modeling the temperature effect on PAH formation in pyrolysis of acetylene. Fuel, 2019, 255, 115796. | 3.4 | 22 |
| 40 | Accurate entropy calculation for large flexible hydrocarbons using a multi-structural 2-dimensional torsion method. Physical Chemistry Chemical Physics, 2019, 21, 10003-10010. | 1.3 | 12 |
| 41 | TDLAS Monitoring of Carbon Dioxide with Temperature Compensation in Power Plant Exhausts. Applied Sciences (Switzerland), 2019, 9, 442. | 1.3 | 26 |
| 42 | Stability and emission characteristics of nonpremixed MILD combustion from a parallel-jet burner in a cylindrical furnace. Energy, 2019, 170, 1181-1190. | 4.5 | 38 |
| 43 | Cascaded group-additivity ONIOM: A new method to approach CCSD(T)/CBS energies of large aliphatic hydrocarbons. Combustion and Flame, 2019, 201, 31-43. | 2.8 | 9 |
| 44 | Influence of Line Pair Selection on Flame Tomography Using Infrared Absorption Spectroscopy. Applied Spectroscopy, 2019, 73, 529-539. | 1.2 | 32 |
| 45 | Ultrasensitive photoacoustic detection in a high-finesse cavity with Poundâ€“Dreverâ€“Hall locking. Optics Letters, 2019, 44, 1924. | 1.7 | 43 |
| 46 | Photothermal CO detection in a hollow-core negative curvature fiber. Optics Letters, 2019, 44, 4048. | 1.7 | 52 |
| 47 | Accurate prediction of bond dissociation energies of large n-alkanes using ONIOM-CCSD(T)/CBS methods. Chemical Physics Letters, 2018, 699, 139-145. | 1.2 | 10 |
| 48 | In Situ Flame Temperature Measurements Using a Mid-Infrared Two-Line H<sub>2</sub>O Laser-Absorption Thermometry. Combustion Science and Technology, 2018, 190, 393-408. | 1.2 | 32 |
| 49 | Characterization of Temperature and Soot Volume Fraction in Laminar Premixed Flames: Laser Absorption/Extinction Measurement and Two-Dimensional Computational Fluid Dynamics Modeling. Energy & Fuels, 2018, 32, 12962-12970. | 2.5 | 14 |
| 50 | Pressure-dependent kinetics of methyl formate reactions with OH at combustion, atmospheric and interstellar temperatures. Physical Chemistry Chemical Physics, 2018, 20, 26190-26199. | 1.3 | 40 |
| 51 | Interband cascade laser absorption sensor for real-time monitoring of formaldehyde filtration by a nanofiber membrane. Applied Optics, 2018, 57, 8005. | 0.9 | 9 |
| 52 | A theoretical and shock tube kinetic study on hydrogen abstraction from phenyl formate. Physical Chemistry Chemical Physics, 2018, 20, 21280-21285. | 1.3 | 13 |
| 53 | Temperature and H2O sensing in laminar premixed flames using mid-infrared heterodyne phase-sensitive dispersion spectroscopy. Applied Physics B: Lasers and Optics, 2018, 124, 1. | 1.1 | 6 |
| 54 | Premixed MILD Combustion of Propane in a Cylindrical Furnace with a Single Jet Burner: Combustion and Emission Characteristics. Energy & Fuels, 2018, 32, 8817-8829. | 2.5 | 34 |

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|---|---|---|---|
| 55 | Metalâ€“organic framework-based nanofiber filters for effective indoor air quality control. Journal of Materials Chemistry A, 2018, 6, 15807-15814. | 5.2 | 169 |
| 56 | Standoff detection of VOCs using external cavity quantum cascade laser spectroscopy. Laser Physics Letters, 2018, 15, 085701. | 0.6 | 15 |
| 57 | Fiber-ring laser intracavity QEPAS gas sensor using a 7.2â€¯kHz quartz tuning fork. Sensors and Actuators B: Chemical, 2018, 268, 512-518. | 4.0 | 46 |
| 58 | Mid-infrared photothermal interferometric gas sensing in hollow-core optical fibers. , 2018, , . | | 0 |
| 59 | Fiber Laser Intracavity Quartz-Enhanced Photoacoustic Gas Sensor. , 2018, , . | | 0 |
| 60 | CO2 measurement in laminar premixed flames using heterodyne phase-sensitive dispersion spectroscopy. , 2018, , . | | 0 |
| 61 | Quartz-Enhanced Photoacoustic Spectroscopy (QEPAS) Detection of the Î½<sub>7</sub> Band of Ethylene at Low Pressure with CO<sub>2</sub> Interference Analysis. Applied Spectroscopy, 2017, 71, 1834-1841. | 1.2 | 17 |
| 62 | A portable low-power QEPAS-based CO2 isotope sensor using a fiber-coupled interband cascade laser. Sensors and Actuators B: Chemical, 2017, 246, 710-715. | 4.0 | 63 |
| 63 | Mercury Telluride Quantum Dot Based Phototransistor Enabling High-Sensitivity Room-Temperature Photodetection at 2000 nm. ACS Nano, 2017, 11, 5614-5622. | 7.3 | 110 |
| 64 | QEPAS nitric oxide sensor based on a mid-infrared fiber-coupled quantum cascade laser. , 2017, , . | | 0 |
| 65 | Non-uniform temperature and species concentration measurements in a laminar flame using multi-band infrared absorption spectroscopy. Applied Physics B: Lasers and Optics, 2017, 123, 1. | 1.1 | 55 |
| 66 | Improved evanescent-wave quartz-enhanced photoacoustic CO sensor using an optical fiber taper. Sensors and Actuators B: Chemical, 2017, 248, 1023-1028. | 4.0 | 38 |
| 67 | Theoretical and Experimental Investigation of Fiber-Ring Laser Intracavity Photoacoustic Spectroscopy (FLI-PAS) for Acetylene Detection. Journal of Lightwave Technology, 2017, 35, 4519-4525. | 2.7 | 21 |
| 68 | A Mid-Infrared Fiber-Coupled QEPAS Nitric Oxide Sensor for Real-Time Engine Exhaust Monitoring. IEEE Sensors Journal, 2017, 17, 7418-7424. | 2.4 | 30 |
| 69 | Combined Ab Initio, Kinetic Modeling, and Shock Tube Study of the Thermal Decomposition of Ethyl Formate. Journal of Physical Chemistry A, 2017, 121, 6568-6579. | 1.1 | 14 |
| 70 | Theoretical and Shock Tube Study of the Rate Constants for Hydrogen Abstraction Reactions of Ethyl Formate. Journal of Physical Chemistry A, 2017, 121, 6304-6313. | 1.1 | 22 |
| 71 | Chemical kinetic modeling and shock tube study of methyl propanoate decomposition. Combustion and Flame, 2017, 184, 30-40. | 2.8 | 18 |
| 72 | Pyrolysis and oxidation of methyl acetate in a shock tube: A multi-species time-history study. Proceedings of the Combustion Institute, 2017, 36, 255-264. | 2.4 | 20 |

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|---|---|---|---|
| 73 | Wavelength-stabilization-based photoacoustic spectroscopy for methane detection. Measurement Science and Technology, 2017, 28, 065102. | 1.4 | 31 |
| 74 | An erbium doped fiber-ring laser-based intracavity photoacoustic C<inf>2</inf>H<inf>2</inf> gas sensor. , 2017, , . | | 0 |
| 75 | Fiber-ring laser-based intracavity photoacoustic spectroscopy for trace gas sensing. Optics Letters, 2017, 42, 2114. | 1.7 | 40 |
| 76 | Mid-infrared fiber-optic photothermal interferometry. Optics Letters, 2017, 42, 3718. | 1.7 | 35 |
| 77 | Experimental and modeling study of off-beam quartz-enhanced photoacoustic detection of nitrogen monoxide (NO) using a quantum cascade laser. , 2016, , . | | 0 |
| 78 | Mid-infrared multimode fiber-coupled quantum cascade laser for off-beam quartz-enhanced photoacoustic detection. Optics Letters, 2016, 41, 4095. | 1.7 | 34 |
| 79 | Quartz-enhanced photoacoustic detection of ethylene using a 105 Î¼m quantum cascade laser. Optics Express, 2016, 24, 4143. | 1.7 | 52 |
| 80 | Optical fiber tip-based quartz-enhanced photoacoustic sensor for trace gas detection. Applied Physics B: Lasers and Optics, 2016, 122, 1. | 1.1 | 21 |
| 81 | Interband cascade laser based absorption sensor for ppb-level formaldehyde detection. , 2015, , . | | 0 |
| 82 | Sensitive detection of formaldehyde using an interband cascade laser near 3.6 Î¼m. Sensors and Actuators B: Chemical, 2015, 221, 1062-1068. | 4.0 | 70 |
| 83 | Quantum cascade laser-based multipass absorption system for hydrogen peroxide detection. , 2015, , . | | 0 |
| 84 | Quantum cascade laser-based sensor system for nitric oxide detection. Proceedings of SPIE, 2015, , . | 0.8 | 5 |
| 85 | Position effects of acoustic micro-resonator in quartz enhanced photoacoustic spectroscopy. Sensors and Actuators B: Chemical, 2015, 206, 364-370. | 4.0 | 36 |
| 86 | Atmospheric CH_4 and N_2O measurements near Greater Houston area landfills using a QCL-based QEPAS sensor system during DISCOVER-AQ 2013. Optics Letters, 2014, 39, 957. | 1.7 | 62 |
| 87 | Double acoustic microresonator quartz-enhanced photoacoustic spectroscopy. Optics Letters, 2014, 39, 2479. | 1.7 | 58 |
| 88 | Hydrogen peroxide detection with quartz-enhanced photoacoustic spectroscopy using a distributed-feedback quantum cascade laser. Applied Physics Letters, 2014, 104, . | 1.5 | 44 |
| 89 | Multi-pass absorption spectroscopy for H<sub>2</sub>O<sub>2</sub> detection using a CW DFB-QCL. Advanced Optical Technologies, 2014, 3, 549-558. | 0.9 | 6 |
| 90 | Multi-band infrared CO2 absorption sensor for sensitive temperature and species measurements in high-temperature gases. Applied Physics B: Lasers and Optics, 2014, 116, 855-865. | 1.1 | 66 |

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|---|---|---|---|
| 91 | Single-QCL-based absorption sensor for simultaneous trace-gas detection of CH4 and N2O. Applied Physics B: Lasers and Optics, 2014, 117, 245-251. | 1.1 | 80 |
| 92 | A compact QCL based methane and nitrous oxide sensor for environmental and medical applications. Analyst, The, 2014, 139, 2065. | 1.7 | 76 |
| 93 | QCL-based TDLAS sensor for detection of NO toward emission measurements from ovarian cancer cells. Applied Physics B: Lasers and Optics, 2014, 117, 445-451. | 1.1 | 32 |
| 94 | Experimental and Modeling Study of the Thermal Decomposition of C3â€“C5 Ethyl Esters Behind Reflected Shock Waves. Journal of Physical Chemistry A, 2014, 118, 1785-1798. | 1.1 | 33 |
| 95 | QCL Based Absorption Sensor for Simultaneous Trace-Gas Detection of CH4 and N2O. , 2014, , . | | 1 |
| 96 | Constrained reaction volume approach for studying chemical kinetics behind reflected shock waves. Combustion and Flame, 2013, 160, 1550-1558. | 2.8 | 42 |
| 97 | Multi-species time-history measurements during n-hexadecane oxidation behind reflected shock waves. Proceedings of the Combustion Institute, 2013, 34, 369-376. | 2.4 | 13 |
| 98 | Shock tube/laser absorption studies of the decomposition of methyl formate. Proceedings of the Combustion Institute, 2013, 34, 453-461. | 2.4 | 30 |
| 99 | Multi-species time-history measurements during high-temperature acetone and 2-butanone pyrolysis. Proceedings of the Combustion Institute, 2013, 34, 607-615. | 2.4 | 39 |
| 100 | Shock tube study of methanol, methyl formate pyrolysis: CH3OH and CO time-history measurements. Combustion and Flame, 2013, 160, 2669-2679. | 2.8 | 50 |
| 101 | Methane and ethylene time-history measurements in n-butane and n-heptane pyrolysis behind reflected shock waves. Fuel, 2013, 108, 557-564. | 3.4 | 22 |
| 102 | Shock tube measurements of methane, ethylene and carbon monoxide time-histories in DME pyrolysis. Combustion and Flame, 2013, 160, 747-754. | 2.8 | 28 |
| 103 | Fuel and Ethylene Measurements during n-dodecane, methylcyclohexane, and iso-cetane pyrolysis in shock tubes. Fuel, 2013, 103, 1060-1068. | 3.4 | 47 |
| 104 | Shock tube measurements of 3-pentanone pyrolysis and oxidation. Combustion and Flame, 2012, 159, 3251-3263. | 2.8 | 21 |
| 105 | Shock tube studies of methyl butanoate pyrolysis with relevance to biodiesel. Combustion and Flame, 2012, 159, 3235-3241. | 2.8 | 43 |
| 106 | CO concentration and temperature sensor for combustion gases using quantum-cascade laser absorption near 4.7 Î¼m. Applied Physics B: Lasers and Optics, 2012, 107, 849-860. | 1.1 | 145 |
| 107 | IR laser absorption diagnostic for C<sub>2</sub>H<sub>4</sub> in shock tube kinetics studies. International Journal of Chemical Kinetics, 2012, 44, 423-432. | 1.0 | 72 |
| 108 | Temperature sensing in shock-heated evaporating aerosol using wavelength-modulation absorption spectroscopy of CO<sub>2</sub>near 2.7 Âµm. Measurement Science and Technology, 2010, 21, 105603. | 1.4 | 21 |

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|---|---|---|---|
| 109 | Phase-modulated multigroup volume holographic correlator. Optics Letters, 2008, 33, 1144. | 1.7 | 9 |