# Terrence R Meyer

List of Publications by Year
in descending order



| 117 | 3,331 | 101543 | 155660 |
|---|---|---|---|
| papers | citations | 36 h-index | 55 g-index |

| 118 | 118 | 118 | 1089 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Experimental and modeling study of chemical-kinetics mechanisms for H2â€“NH3â€“air mixtures in laminar premixed jet flames. Fuel, 2013, 108, 166-176. | 6.4 | 188 |
| 2 | Femtosecond coherent anti-Stokes Raman scattering measurement of gas temperatures from frequency-spread dephasing of the Raman coherence. Applied Physics Letters, 2006, 89, 251112. | 3.3 | 131 |
| 3 | Hybrid femtosecond/picosecond coherent anti-Stokes Raman scattering for high-speed gas-phase thermometry. Optics Letters, 2010, 35, 2430. | 3.3 | 119 |
| 4 | Quasi-continuous burst-mode laser for high-speed planar imaging. Optics Letters, 2012, 37, 1346. | 3.3 | 114 |
| 5 | MHz-rate nitric oxide planar laser-induced fluorescence imaging in a Mach 10 hypersonic wind tunnel. Applied Optics, 2011, 50, A20. | 2.1 | 110 |
| 6 | Single-shot gas-phase thermometry using pure-rotational hybrid femtosecond/picosecond coherent anti-Stokes Raman scattering. Optics Express, 2011, 19, 15627. | 3.4 | 95 |
| 7 | Ultrahigh-frame-rate OH fluorescence imaging in turbulent flames using a burst-mode optical parametric oscillator. Optics Letters, 2009, 34, 1309. | 3.3 | 90 |
| 8 | Time- and frequency-dependent model of time-resolved coherent anti-Stokes Raman scattering (CARS) with a picosecond-duration probe pulse. Journal of Chemical Physics, 2014, 140, 024316. | 3.0 | 87 |
| 9 | Time-resolved dynamics of resonant and nonresonant broadband picosecond coherent anti-Stokes Raman scattering signals. Applied Physics Letters, 2005, 87, 264103. | 3.3 | 82 |
| 10 | Applications of Ultrafast Lasers for Optical Measurements in Combusting Flows. Annual Review of Analytical Chemistry, 2008, 1, 663-687. | 5.4 | 80 |
| 11 | 100â€‰â€‰kHz, 100â€‰â€‰ms, 400â€‰â€‰J burst-mode laser with dual-wavelength diode-pumped amplifiers. Optics Letters, 2014, 39, 4735. | 3.3 | 71 |
| 12 | kHz-rate four-dimensional fluorescence tomography using an ultraviolet-tunable narrowband burst-mode optical parametric oscillator. Optica, 2017, 4, 897. | 9.3 | 69 |
| 13 | High-speed, three-dimensional tomographic laser-induced incandescence imaging of soot volume fraction in turbulent flames. Optics Express, 2016, 24, 29547. | 3.4 | 68 |
| 14 | All-diode-pumped quasi-continuous burst-mode laser for extended high-speed planar imaging. Optics Express, 2013, 21, 681. | 3.4 | 66 |
| 15 | Broadband coherent anti-Stokes Raman scattering spectroscopy of nitrogen using a picosecond modeless dye laser. Optics Letters, 2005, 30, 3222. | 3.3 | 65 |
| 16 | Interference-free gas-phase thermometry at elevated pressure using hybrid femtosecond/picosecond rotational coherent anti-Stokes Raman scattering. Optics Express, 2012, 20, 5003. | 3.4 | 63 |
| 17 | Communication: Time-domain measurement of high-pressure N2 and O2 self-broadened linewidths using hybrid femtosecond/picosecond coherent anti-Stokes Raman scattering. Journal of Chemical Physics, 2011, 135, 201104. | 3.0 | 61 |
| 18 | Measurements of OH mole fraction and temperature up to 20 kHz by using a diode-laser-based UV absorption sensor. Applied Optics, 2005, 44, 6729. | 2.1 | 57 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | 4D spatiotemporal evolution of combustion intermediates in turbulent flames using burst-mode volumetric laser-induced fluorescence. Optics Letters, 2017, 42, 2830. | 3.3 | 56 |
| 20 | Ballistic imaging of the liquid core for a steady jet in crossflow. Applied Optics, 2005, 44, 6627. | 2.1 | 55 |
| 21 | Improving Signal-To-Interference Ratio in Rich Hydrocarbonâ€"Air Flames Using Picosecond Coherent Anti-Stokes Raman Scattering. Applied Spectroscopy, 2007, 61, 1135-1140. | 2.2 | 55 |
| 22 | Narrow-linewidth megahertz-repetition-rate optical parametric oscillator for high-speed flow and combustion diagnostics. Applied Optics, 2008, 47, 64. | 2.1 | 54 |
| 23 | 100-ps-pulse-duration, 100-J burst-mode laser for kHzâ€“MHz flow diagnostics. Optics Letters, 2014, 39, 6462. | 3.3 | 54 |
| 24 | Single-shot ultrafast coherent anti-Stokes Raman scattering of vibrational/rotational nonequilibrium. Optica, 2017, 4, 563. | 9.3 | 53 |
| 25 | Simultaneous planar laser-induced incandescence, OH planar laser-induced fluorescence, and droplet Mie scattering in swirl-stabilized spray flames. Applied Optics, 2005, 44, 445. | 2.1 | 52 |
| 26 | Ultrafast time-gated ballistic-photon imaging and shadowgraphy in optically dense rocket sprays. Applied Optics, 2009, 48, B137. | 2.1 | 50 |
| 27 | Communication: Hybrid femtosecond/picosecond rotational coherent anti-Stokes Raman scattering thermometry using a narrowband time-asymmetric probe pulse. Journal of Chemical Physics, 2012, 136, 111101. | 3.0 | 49 |
| 28 | Single-shot, volumetrically illuminated, three-dimensional, tomographic laser-induced-fluorescence imaging in a gaseous free jet. Optics Express, 2016, 24, 10040. | 3.4 | 46 |
| 29 | Probe-pulse optimization for nonresonant suppression in hybrid fs/ps coherent anti-Stokes Raman scattering at high temperature. Optics Express, 2011, 19, 13326. | 3.4 | 45 |
| 30 | Dual-pump vibrational/rotational femtosecond/picosecond coherent anti-Stokes Raman scattering temperature and species measurements. Optics Letters, 2014, 39, 6608. | 3.3 | 45 |
| 31 | Simultaneous high-speed planar imaging of mixture fraction and velocity using a burst-mode laser. Applied Physics B: Lasers and Optics, 2013, 113, 93-97. | 2.2 | 42 |
| 32 | Ballistic imaging in the near-field of an effervescent spray. Experiments in Fluids, 2010, 49, 911-923. | 2.4 | 41 |
| 33 | Vibrational femtosecond/picosecond coherent antiâ€Stokes Raman scattering with enhanced temperature sensitivity for flame thermometry from 300 to 2400â€‰K. Journal of Raman Spectroscopy, 2015, 46, 702-707. | 2.5 | 38 |
| 34 | Spatiotemporal analysis of turbulent jets enabled by 100-kHz, 100-ms burst-mode particle image velocimetry. Experiments in Fluids, 2016, 57, 1. | 2.4 | 38 |
| 35 | Dual-pump dual-broadband coherent anti-Stokes Raman scattering in reacting flows. Optics Letters, 2004, 29, 1843. | 3.3 | 37 |
| 36 | Megahertz-rate OH planar laser-induced fluorescence imaging in a rotating detonation combustor. Optics Letters, 2020, 45, 5776. | 3.3 | 37 |

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|---|---|---|---|
| 37 | 20-kHz-rate three-dimensional tomographic imaging of the concentration field in a turbulent jet. Proceedings of the Combustion Institute, 2017, 36, 4611-4618. | 3.9 | 36 |
| 38 | Advances in burst-mode laser diagnostics for reacting and nonreacting flows. Proceedings of the Combustion Institute, 2021, 38, 1533-1560. | 3.9 | 36 |
| 39 | 100â€‰â€‰kHz thousand-frame burst-mode planar imaging in turbulent flames. Optics Letters, 2014, 39, 739. | 3.3 | 33 |
| 40 | On the effects of reactant stratification and wall curvature in non-premixed rotating detonation combustors. Combustion and Flame, 2022, 240, 112013. | 5.2 | 33 |
| 41 | Experimental study of internal flow structures in cylindrical rotating detonation engines. Proceedings of the Combustion Institute, 2021, 38, 3759-3768. | 3.9 | 32 |
| 42 | Compact burst-mode Nd:YAG laser for kHzâ€“MHz bandwidth velocity and species measurements. Optics Letters, 2018, 43, 735. | 3.3 | 31 |
| 43 | Burst-mode femtosecond laser electronic excitation tagging for kHzâ€“MHz seedless velocimetry. Optics Letters, 2020, 45, 335. | 3.3 | 31 |
| 44 | Evaluation of X-ray sources for quantitative two- and three-dimensional imaging of liquid mass distribution in atomizing sprays. International Journal of Multiphase Flow, 2014, 59, 113-120. | 3.4 | 29 |
| 45 | High-speed, two-dimensional synchrotron white-beam x-ray radiography of spray breakup and atomization. Optics Express, 2017, 25, 1605. | 3.4 | 29 |
| 46 | Investigation of optical fibers for coherent anti-Stokes Raman scattering (CARS) spectroscopy in reacting flows. Experiments in Fluids, 2010, 49, 969-984. | 2.4 | 27 |
| 47 | Spatially and temporally resolved temperature and shock-speed measurements behind a laser-induced blast wave of energetic nanoparticles. Journal of Applied Physics, 2013, 113, 184310. | 2.5 | 27 |
| 48 | Hybrid femtosecond/picosecond coherent antiâ€Stokes Raman scattering for highâ€speed CH<sub>4</sub>/N<sub>2</sub> measurements in binary gas mixtures. Journal of Raman Spectroscopy, 2013, 44, 1336-1343. | 2.5 | 26 |
| 49 | Effects of repetitive pulsing on multi-kHz planar laser-induced incandescence imaging in laminar and turbulent flames. Applied Optics, 2015, 54, 3331. | 2.1 | 26 |
| 50 | High-speed CH planar laser-induced fluorescence imaging using a multimode-pumped optical parametric oscillator. Optics Letters, 2011, 36, 3927. | 3.3 | 22 |
| 51 | Generation of high-energy, kilohertz-rate narrowband tunable ultraviolet pulses using a burst-mode dye laser system. Optics Letters, 2018, 43, 1191. | 3.3 | 22 |
| 52 | Femtosecond/picosecond rotational coherent anti-Stokes Raman scattering thermometry in the exhaust of a rotating detonation combustor. Combustion and Flame, 2021, 231, 111504. | 5.2 | 21 |
| 53 | Interference-free hybrid fs/ps vibrational CARS thermometry in high-pressure flames. Optics Letters, 2018, 43, 4911. | 3.3 | 21 |
| 54 | Characterization of a CH planar laser-induced fluorescence imaging system using a kHz-rate multimode-pumped optical parametric oscillator. Applied Optics, 2012, 51, 2589. | 1.8 | 19 |

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|---|---|---|---|
| 55 | Femtosecond, two-photon, laser-induced fluorescence (TP-LIF) measurement of CO in high-pressure flames. Applied Optics, 2018, 57, 5666. | 1.8 | 19 |
| 56 | Flexible chirp-free probe pulse amplification for kHz fs/ps rotational CARS. Optics Letters, 2020, 45, 503. | 3.3 | 18 |
| 57 | Quantitative measurement of binary liquid distributions using multiple-tracer x-ray fluorescence and radiography. Optics Express, 2015, 23, 1730. | 3.4 | 17 |
| 58 | Burst-mode OH/CH<sub>2</sub>O planar laser-induced fluorescence imaging of the heat release zone in an unsteady flame. Optics Express, 2018, 26, 18105. | 3.4 | 15 |
| 59 | Application of femtosecond laser electronic excitation tagging (FLEET) velocimetry in a bladeless turbine. Measurement Science and Technology, 2020, 31, 064005. | 2.6 | 15 |
| 60 | Simultaneous 100-kHz acetone planar laser-induced fluorescence and OH* chemiluminescence in a linear non-premixed detonation channel. Combustion and Flame, 2022, 244, 112209. | 5.2 | 15 |
| 61 | Development of a diode-pumped 100-ms quasi-continuous burst-mode laser for high-speed combustion diagnostics. , 2014, , . | | 13 |
| 62 | 4D spatiotemporal evolution of liquid spray using kilohertz-rate x-ray computed tomography. Optics Letters, 2019, 44, 5013. | 3.3 | 13 |
| 63 | Quantitative time-averaged gas and liquid distributions using x-ray fluorescence and radiography in atomizing sprays. Optics Letters, 2015, 40, 2029. | 3.3 | 12 |
| 64 | Femtosecond Laser Electronic Excitation Tagging Velocimetry in a Mach Six Quiet Tunnel. AIAA Journal, 2021, 59, 768-772. | 2.6 | 12 |
| 65 | High-energy laser pulses for extended duration megahertz-rate flow diagnostics. Optics Letters, 2020, 45, 4583. | 3.3 | 12 |
| 66 | Dual-output fs/ps burst-mode laser for megahertz-rate rotational coherent anti-Stokes Raman scattering. Optics Letters, 2020, 45, 5933. | 3.3 | 12 |
| 67 | Burst-mode laser architecture for the generation of high-peak-power MHz-rate femtosecond pulses. OSA Continuum, 2019, 2, 3490. | 1.8 | 11 |
| 68 | Spectrally filtered psâ€“ns emission dynamics of atmospheric-pressure nanosecond pulsed plasmas. Applied Physics Letters, 2022, 120, . | 3.3 | 11 |
| 69 | Quantitative femtosecond, two-photon laser-induced fluorescence of atomic oxygen in high-pressure flames. Applied Optics, 2019, 58, 1984. | 1.8 | 10 |
| 70 | Megahertz-rate background-oriented schlieren tomography in post-detonation blasts. Applied Optics, 2022, 61, 2444. | 1.8 | 10 |
| 71 | Simultaneous high-speed measurement of temperature and lifetime-corrected OH laser-induced fluorescence in unsteady flames. Optics Letters, 2007, 32, 2221. | 3.3 | 9 |
| 72 | Visible emission spectra of thermographic phosphors under x-ray excitation. Measurement Science and Technology, 2021, 32, 094008. | 2.6 | 9 |

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|---|---|---|---|
| 73 | Dynamic imaging of the temperature field within an energetic composite using phosphor thermography. Applied Optics, 2019, 58, 4320. | 1.8 | 8 |
| 74 | Synchrotron X-Ray Interrogation of Turbulent Gasâ€“Liquid Mixing in Cryogenic Rocket Sprays. AIAA Journal, 2017, 55, 4306-4313. | 2.6 | 7 |
| 75 | CH and NO planar laser-induced fluorescence and Rayleigh-scattering in turbulent flames using a multimode optical parametric oscillator. Applied Optics, 2021, 60, 98. | 1.8 | 7 |
| 76 | Grid-based femtosecond laser electronic excitation tagging for single-ended 2D velocimetry at kilohertz rates. Applied Optics, 2021, 60, 10714. | 1.8 | 7 |
| 77 | High Speed Particle Image Velocimetry and Particle Tracking Methods in Reactive and Non-Reactive Flows. , 2019, , . | | 6 |
| 78 | Detonation Dynamics Visualization From Megahertz Imaging. , 2020, , . | | 6 |
| 79 | Hybrid fs/ps coherent anti-Stokes Raman scattering for non-equilibrium environments. , 2016, , . | | 6 |
| 80 | Investigation of energy distributions behind a microscale gas-phase detonation tube using hybrid fs/ps coherent anti-Stokes Raman scattering. , 2017, , . | | 5 |
| 81 | Pressure-scaling characteristics of femtosecond two-photon laser-induced fluorescence of carbon monoxide. Applied Optics, 2019, 58, 7458. | 1.8 | 5 |
| 82 | Burst-mode 100â€‰â€‰kHz N2 ps-CARS flame thermometry with concurrent nonresonant background referencing. Optics Letters, 2021, 46, 5489. | 3.3 | 5 |
| 83 | Potential of two-line atomic fluorescence for temperature imaging in turbulent indium-oxide-producing flames. Journal of Nanoparticle Research, 2015, 17, 1. | 1.9 | 4 |
| 84 | High-speed three-dimensional tomographic measurements for combustion systems. , 2016, , . | | 4 |
| 85 | Lifetime-filtered laser-induced exciplex fluorescence for crosstalk-free liquid-vapor imaging. Optics Letters, 2019, 44, 1399. | 3.3 | 4 |
| 86 | Tracer-free liquidâ€“vapor imaging using lifetime-filtered planar laser-induced fluorescence. Optics Letters, 2019, 44, 2101. | 3.3 | 4 |
| 87 | 100-kHz burst-mode particle image velocimetry: space-time correlations and considerations for spatial and temporal resolution. , 2016, , . | | 3 |
| 88 | 3D OH LIF Measurements in a Lifted Flame. , 2017, , . | | 3 |
| 89 | Purdue Small Turbine Aerothermal Rotating Rig (STARR). , 2019, , . | | 3 |
| 90 | Megahertz OH-PLIF Imaging in a Rotating Detonation Engine. , 2021, , . | | 3 |

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|---|---|---|---|
| 91 | Particle Image Velocimetry in a High-Pressure Turbine Stage at Aerodynamically Engine Representative Conditions. Journal of Engineering for Gas Turbines and Power, 2021, 143, . | 1.1 | 3 |
| 92 | Flow conditioning system for tri-sonic high pressure aerothermal testing. Flow Measurement and Instrumentation, 2021, 79, 101910. | 2.0 | 3 |
| 93 | Femtosecond laser activation and sensing of hydroxyl for velocimetry in reacting flows. Applied Optics, 2020, 59, 10853. | 1.8 | 3 |
| 94 | Supersonic Exhaust from a Rotating Detonation Engine with Throatless Diverging Channel. AIAA Journal, 2022, 60, 4015-4023. | 2.6 | 3 |
| 95 | Micro-Optical Initiation of Nanoenergetic Materials Using a Temporally Tailored Variable-Pulse-Width Laser. Journal of Nanotechnology in Engineering and Medicine, 2012, 3, . | 0.8 | 2 |
| 96 | Hybrid fs/ps coherent anti-Stokes Raman scattering in a non-equilibrium environment initiated by a ns laser spark. , 2015, , . | | 2 |
| 97 | Evaluation of Hybrid fs/ps coherent anti-Stokes Raman scattering temperature and pressure sensitivity at combustor relevant conditions. , 2016, , . | | 2 |
| 98 | KHzâ€“MHz Rate Laser-Based Tracking of Particles and Product Gases for Multiphase Blast Fields. , 2018, , . | | 2 |
| 99 | MASS DISTRIBUTION AND MIXING MEASUREMENTS IN NON-NEWTONIAN IMPINGING JETS. Atomization and Sprays, 2019, 29, 987-1003. | 0.8 | 2 |
| 100 | Concentration and pressure scaling of CH2O electronic-resonance-enhanced coherent anti-Stokes Raman scattering signals. Applied Optics, 2021, 60, 1051. | 1.8 | 2 |
| 101 | Application of 100 kHz Acetone-PLIF for the Investigation of Mixing Dynamics in a Self-Excited Linear Detonation Channel. , 2021, , . | | 2 |
| 102 | Evaluation of liquid-phase thermometry in impinging jet sprays using synchrotron x-ray scattering. Applied Optics, 2021, 60, 2967. | 1.8 | 2 |
| 103 | Time-resolved Volumetric (4D) Laser Induced Fluorescence Imaging of Primary Spray Breakup. , 2022, , . | | 2 |
| 104 | Reconstruction of Ligaments and Droplets Via Multiview Digital Inline Holography. Journal of Fluids Engineering, Transactions of the ASME, 2022, 144, . | 1.5 | 2 |
| 105 | Development of Two-Color 3D Tomographic VLIF Measurements. , 2018, , . | | 1 |
| 106 | Pressure Scaling of Spatiotemporally Resolved Femtosecond Two-photon Laser-Induced Fluorescence of CO. , 2019, , . | | 1 |
| 107 | 0.1-5 MHz ultrahigh-speed gas densitydistributions using digital holographicinterferometry. Applied Optics, 2022, 61, 28-34. | 1.8 | 1 |
| 108 | Recent developments in x-ray diagnostics for cryogenic and optically dense coaxial rocket sprays. , 2017, , . | | 0 |

| # | Article | IF | Citations |
|---|---|---|---|
| 109 | Diffuse Interface Eulerian Spray Atomization Modeling of Impinging Jet Sprays. , 2018, , . | | 0 |
| 110 | Burst-Mode 100 kHz - 1 MHz Velocimetry in Supersonic and Hypersonic Flows. , 2019, , . | | 0 |
| 111 | MHz-Rate Ultrafast Laser for Nonlinear Spectroscopy in Transient and Nonequilibrium Hypersonic Flows. , 2019, , . | | 0 |
| 112 | Temperature-dependent x-ray fluorescent response from thermographic phosphors under x-ray excitation. Applied Physics Letters, 2021, 119, 034103. | 3.3 | 0 |
| 113 | High-speed three-dimensional tomography of soot and combustion intermediates in jet diffusion flames. , 2016, , . | | 0 |
| 114 | High-Energy Flexible Probe Pulse Generation for kHz fs-ps Rotational Coherent Anti-Stokes Raman Scattering. , 2020, , . | | 0 |
| 115 | Megahertz-rate Femtosecond Laser Activation and Sensing of Hydroxyl for Velocimetry in a Rotating Detonation Combustor Exhaust. , 2022, , . | | 0 |
| 116 | Detonation wave dynamics of straight and expanding annular injectors using MHz rate OH* chemiluminescence, and URANS simulations. , 2022, , . | | 0 |
| 117 | 100 kHz burst-mode picosecond vibrational N2CARS thermometry in energetic combustion environments. , 2022, , . | | 0 |