# David Moore

List of Publications by Year
in descending order



| | | | |
|---|---|---|---|
| 101 papers | 3,365 citations | 186265 28 h-index | 149698 56 g-index |
| 168 all docs | 168 docs citations | 168 times ranked | 3064 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Instrumentation for trace detection of high explosives. Review of Scientific Instruments, 2004, 75, 2499-2512. | 1.3 | 740 |
| 2 | Progress in plasmonic engineering of surface-enhanced Raman-scattering substrates toward ultra-trace analysis. Analytical and Bioanalytical Chemistry, 2005, 382, 1751-1770. | 3.7 | 396 |
| 3 | Recent Advances in Trace Explosives Detection Instrumentation. Sensing and Imaging, 2007, 8, 9-38. | 1.5 | 190 |
| 4 | Portable Raman explosives detection. Analytical and Bioanalytical Chemistry, 2009, 393, 1571-1578. | 3.7 | 164 |
| 5 | Measurement of Shock Wave Rise Times in Metal Thin Films. Physical Review Letters, 2000, 85, 3205-3208. | 7.8 | 127 |
| 6 | The elastic-plastic response of aluminum films to ultrafast laser-generated shocks. Journal of Applied Physics, 2011, 109, . | 2.5 | 123 |
| 7 | Single shot measurements of laser driven shock waves using ultrafast dynamic ellipsometry. Journal of Applied Physics, 2007, 102, . | 2.5 | 69 |
| 8 | Comparative infrared and Raman spectroscopy of energetic polymers. Journal of Molecular Structure, 2003, 661-662, 561-566. | 3.6 | 61 |
| 9 | Shock Induced Reaction Observed via Ultrafast Infrared Absorption in Poly(vinyl nitrate) Films. Journal of Physical Chemistry A, 2004, 108, 9342-9347. | 2.5 | 60 |
| 10 | Backward Stimulated Raman Scattering in Shock-Compressed Benzene. Physical Review Letters, 1983, 50, 661-664. | 7.8 | 59 |
| 11 | Spectrally modified chirped pulse generation of sustained shock waves. Applied Physics Letters, 2002, 80, 3919-3921. | 3.3 | 59 |
| 12 | Vibrational spectroscopy of high-temperature, dense molecular fluids by coherent anti-Stokes Raman scattering. Accounts of Chemical Research, 1992, 25, 427-432. | 15.6 | 56 |
| 13 | Advances in explosives analysisâ€”part I: animal, chemical, ion, and mechanical methods. Analytical and Bioanalytical Chemistry, 2016, 408, 35-47. | 3.7 | 54 |
| 14 | Infrared, Raman, and coherent anti-Stokes Raman spectroscopy of the hydrogen/deuterium isotopomers of nitromethane. The Journal of Physical Chemistry, 1991, 95, 3037-3044. | 2.9 | 49 |
| 15 | Coherent antiâ€Stokes Raman spectroscopy of shockâ€compressed liquid nitrogen. Journal of Chemical Physics, 1989, 90, 1368-1376. | 3.0 | 48 |
| 16 | Ultrafast interferometric microscopy for laser-driven shock wave characterization. Journal of Applied Physics, 2002, 92, 3679-3682. | 2.5 | 47 |
| 17 | Advances in explosives analysisâ€”partÂII: photon and neutron methods. Analytical and Bioanalytical Chemistry, 2016, 408, 49-65. | 3.7 | 47 |
| 18 | Nomenclature, symbols, units, and their usage in spectrochemical analysis XVIII. Laser-based molecular spectrometry for chemical analysis - Raman scattering processes (IUPAC Recommendations 1997). Pure and Applied Chemistry, 1997, 69, 1451-1468. | 1.9 | 41 |

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|---|---|---|---|
| 19 | Ultrafast nonlinear optical method for generation of planar shocks. Applied Physics Letters, 2001, 78, 40-42. | 3.3 | 39 |
| 20 | Ultrafast Chemical Reactions in Shocked Nitromethane Probed with Dynamic Ellipsometry and Transient Absorption Spectroscopy. Journal of Physical Chemistry A, 2014, 118, 2559-2567. | 2.5 | 39 |
| 21 | Simultaneous Multimode Pressure-Induced Frequency-Shift Measurements in Shock-Compressed Organic Liquid Mixtures by Use of Reflected Broadband Coherent Anti-Stokes Raman Scattering. Physical Review Letters, 1983, 50, 1819-1822. | 7.8 | 38 |
| 22 | Calibration of the nitrogen vibron pressure scale for use at high temperatures and pressures. Journal of Applied Physics, 1991, 69, 2793-2799. | 2.5 | 38 |
| 23 | Sub-picosecond shock interferometry of transparent thin films. Journal of Applied Physics, 2003, 93, 5063-5068. | 2.5 | 36 |
| 24 | Shock Induced Chemistry In Liquids Studied With Ultrafast Dynamic Ellipsometry And Visible Transient Absorption Spectroscopy. Journal of Physical Chemistry A, 2012, 116, 10301-10309. | 2.5 | 36 |
| 25 | Ultrafast measurement of the optical properties of aluminum during shock-wave breakout. Physical Review B, 2001, 64, . | 3.2 | 34 |
| 26 | Thermal and mechanical response of PBX 9501 under contact excitation. Journal of Applied Physics, 2013, 113, 084904. | 2.5 | 33 |
| 27 | Photofragment spectroscopy and dynamics of the visible photodissociation of ozone. Journal of Chemical Physics, 1983, 79, 1745-1757. | 3.0 | 32 |
| 28 | Vibrational spectroscopy of fluidN2up to 34 GPa and 4400 K. Physical Review B, 1987, 35, 493-496. | 3.2 | 31 |
| 29 | Continuous Wave Laser Irradiation of Explosives. Propellants, Explosives, Pyrotechnics, 2011, 36, 327-334. | 1.6 | 27 |
| 30 | A CARS investigation of HBr and H2 collisions with hot H atoms produced by ArF laser photolysis of HBr. Journal of Chemical Physics, 1983, 79, 759-764. | 3.0 | 26 |
| 31 | Terminology in soil sampling (IUPAC Recommendations 2005). Pure and Applied Chemistry, 2005, 77, 827-841. | 1.9 | 26 |
| 32 | Pulsed quantum cascade laser-based CRDS substance detection: real-time detection of TNT. Optics Express, 2012, 20, 15489. | 3.4 | 26 |
| 33 | Single shot Hugoniot of cyclohexane using a spatially resolved laser driven shock wave. Applied Physics Letters, 2008, 93, 191903. | 3.3 | 23 |
| 34 | Coherent control of multiple vibrational excitations for optimal detection. New Journal of Physics, 2009, 11, 105047. | 2.9 | 22 |
| 35 | Infrared Complex Refractive Index Measurements and Simulated Reflection Mode Infrared Absorption Spectroscopy of Shock-Compressed Polymer Thin Films. Applied Spectroscopy, 2004, 58, 491-498. | 2.2 | 18 |
| 36 | Quantitative Tradeoffs between Spatial, Temporal, and Thermometric Resolution of Nonresonant Raman Thermometry for Dynamic Experiments. Applied Spectroscopy, 2014, 68, 1279-1288. | 2.2 | 18 |

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| 37 | Submicron-Sized Gamma-HMX: 1. Preparation and Initial Characterization. Journal of Energetic Materials, 2007, 25, 161-171. | 2.0 | 17 |
| 38 | Femtosecond micromachining of internal voids in high explosive crystals for studies of hot spot initiation. Journal of Applied Physics, 2009, 105, . | 2.5 | 17 |
| 39 | Insight into the Chemistry of PETN Under Shock Compression Through Ultrafast Broadband Mid-Infrared Absorption Spectroscopy. Journal of Physical Chemistry A, 2020, 124, 7031-7046. | 2.5 | 17 |
| 40 | Coherent antiâ€Stokes Raman spectroscopy of shockâ€compressed liquid oxygen. Journal of Chemical Physics, 1989, 91, 6765-6771. | 3.0 | 16 |
| 41 | Coherent antiâ€Stokes Raman spectroscopy of shockâ€compressed liquid carbon monoxide. Journal of Chemical Physics, 1991, 95, 5603-5608. | 3.0 | 16 |
| 42 | Coherent antiâ€Stokes Raman spectroscopy of shockâ€compressed liquid nitrogen/carbon monoxide mixtures. Journal of Chemical Physics, 1993, 98, 9379-9388. | 3.0 | 15 |
| 43 | Vibrational spectroscopy of materials under extreme pressure and temperature. Journal of Molecular Structure, 1995, 347, 101-111. | 3.6 | 15 |
| 44 | Influence of Hot Bands on Vibrational Spectra of Shock Compressed Materials. Journal of Physical Chemistry A, 2001, 105, 4660-4663. | 2.5 | 15 |
| 45 | Coherent antiâ€Stokes Raman spectroscopy of shockâ€compressed liquid nitrogen/argon mixtures. Journal of Chemical Physics, 1994, 101, 3488-3494. | 3.0 | 14 |
| 46 | Determination of energetic materials in soil using multivariate analysis of Raman spectra. Fresenius' Journal of Analytical Chemistry, 2001, 369, 393-396. | 1.5 | 11 |
| 47 | Submicron-Sized Gamma-HMX: II. Effect of Pressing on Phase Transition. Journal of Energetic Materials, 2007, 26, 70-78. | 2.0 | 11 |
| 48 | Ultrafast shock-induced chemistry in carbon disulfide probed with dynamic ellipsometry and transient absorption spectroscopy. Journal of Applied Physics, 2015, 117, . | 2.5 | 10 |
| 49 | Temperature measurements in condensed phases using nonâ€resonant femtosecond stimulated Raman scattering. Journal of Raman Spectroscopy, 2013, 44, 433-439. | 2.5 | 9 |
| 50 | Shock physics at the nanoscale [Invited]. Journal of the Optical Society of America B: Optical Physics, 2018, 35, B1. | 2.1 | 9 |
| 51 | A benchtop shock physics laboratory: Ultrafast laser driven shock spectroscopy and interferometry methods. Review of Scientific Instruments, 2019, 90, 063001. | 1.3 | 9 |
| 52 | Ultrafast Spectroscopic Investigation of Shock Compressed Energetic Polymer Films. AIP Conference Proceedings, 2004, , . | 0.4 | 8 |
| 53 | Raman spectroscopy as a tool for long-term energetic material stability studies. Journal of Raman Spectroscopy, 2007, 38, 1221-1224. | 2.5 | 8 |
| 54 | Shock Hugoniot Equations of State for Binary Ideal (Toluene/Fluorobenzene) and Nonideal (Ethanol/Water) Liquid Mixtures. Journal of Physical Chemistry A, 2013, 117, 6158-6163. | 2.5 | 8 |

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| 55 | Explosives analysis. Analytical and Bioanalytical Chemistry, 2009, 395, 245-246. | 3.7 | 7 |
| 56 | Coherent Anti-Stokes Raman Scattering in Benzene and Nitromethane Shock-Compressed to 11 GPA. , 1986, , 207-211. | | 7 |
| 57 | Vibrational frequency shifts of fluid nitrogen fundamental and hot band transitions as a function of pressure and temperature. High Pressure Research, 1990, 4, 577-579. | 1.2 | 6 |
| 58 | Use of the Gerchbergâ€“Saxton algorithm in optimal coherent anti-Stokes Raman spectroscopy. Analytical and Bioanalytical Chemistry, 2012, 402, 423-428. | 3.7 | 6 |
| 59 | Shock Hugoniot equations of state for binary water-alcohol liquid mixtures. Journal of Applied Physics, 2014, 115, 023512. | 2.5 | 6 |
| 60 | Coherent and Spontaneous Raman Spectroscopy in Shocked and Unshocked Liquids. , 1986, , 425-454. | | 6 |
| 61 | Ultrafast Spectroscopic Investigation of Shock Compressed Glycidyl Azide Polymer and Nitrocellulose Films. AIP Conference Proceedings, 2002, , . | 0.4 | 5 |
| 62 | Ultrashort Laser Shock Dynamics. , 2007, , 47-104. | | 5 |
| 63 | Optimal coherent control of sensitivity and selectivity in spectrochemical analysis. Analytical and Bioanalytical Chemistry, 2009, 393, 51-56. | 3.7 | 5 |
| 64 | Pulsed quantum cascade laser based hypertemporal real-time headspace measurements. Optics Express, 2014, 22, 10519. | 3.4 | 5 |
| 65 | Insight into the chemistry of TNT during shock compression through ultrafast absorption spectroscopies. Journal of Chemical Physics, 2021, 154, 054201. | 3.0 | 5 |
| 66 | Analysis of Laser-Driven Shocks in Confined and Unconfined Geometries. AIP Conference Proceedings, 2004, , . | 0.4 | 4 |
| 67 | Ultrafast spectroscopy and interferometry of laser-shocked thin films: practical considerations. , 2004, , . | | 4 |
| 68 | Measurement of Shocked Thin Polymer Film Hugoniot Properties with Ultrafast Dynamic Ellipsometry. AIP Conference Proceedings, 2004, , . | 0.4 | 4 |
| 69 | MOLECULAR SHOCK RESPONSE OF EXPLOSIVES: ELECTRONIC ABSORPTION SPECTROSCOPY. , 2009, , . | | 4 |
| 70 | Ultrafast Dynamic Ellipsometry And Spectroscopy Of Laser Shocked Materials. AIP Conference Proceedings, 2010, , . | 0.4 | 4 |
| 71 | Nonlinear Resonant Ultrasound Spectroscopy for Predicting Sensitivity to Initiation in Granular High Explosives. Propellants, Explosives, Pyrotechnics, 2020, 45, 387-395. | 1.6 | 4 |
| 72 | Sub-picosecond Laser-Driven Shocks in Metals and Energetic Materials. AIP Conference Proceedings, 2002, , . | 0.4 | 3 |

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| 73 | Time-resolved ultrafast spatial interferometric analysis of femtosecond laser-metal interactions. , 2004, , . | | 3 |
| 74 | Optimal dynamic detection of explosives. , 2009, , . | | 3 |
| 75 | Interaction between measurement time and observed Hugoniot cusp due to chemical reactions. AIP Conference Proceedings, 2017, , . | 0.4 | 3 |
| 76 | Single-Pulse Coherent Raman Spectroscopy in Shock-Compressed Benzene. Materials Research Society Symposia Proceedings, 1983, 22, 87. | 0.1 | 2 |
| 77 | Time- and space-resolved optical probing of the shock rise time in thin aluminum films. AIP Conference Proceedings, 2000, , . | 0.4 | 2 |
| 78 | Ultrafast Measurement of the Optical Properties of Shocked Nickel and Laser Heated Gold. AIP Conference Proceedings, 2002, , . | 0.4 | 2 |
| 79 | Long-term data archiving. Analytical and Bioanalytical Chemistry, 2010, 396, 189-192. | 3.7 | 2 |
| 80 | Preparation of Liquid and Solid Samples. , 2014, , 1-14. | | 2 |
| 81 | Coherent Raman studies of shocked liquids. Journal of Physics: Conference Series, 2014, 500, 142021. | 0.4 | 2 |
| 82 | <title>Coherent Raman Scattering Measurements Of Vibrational Frequency Shifts In Shock-Compressed Organic Liquids</title>. , 1983, 0380, 208. | | 1 |
| 83 | Time-resolved coherent anti-Stokes Raman spectroscopy and the measurement of vibrational spectra in shock-compressed molecular materials. , 1990, , . | | 1 |
| 84 | Vibrational spectroscopy in high-temperature dense fluids. , 1992, , . | | 1 |
| 85 | Single pulse ultrafast dynamic ellipsometry. , 2006, , . | | 1 |
| 86 | Ultrafast dynamic ellipsometry of laser ablated silicon. Proceedings of SPIE, 2008, , . | 0.8 | 1 |
| 87 | SINGLE SHOT HUGONIOTS OF TOLUENE AND METHANOL. , 2009, , . | | 1 |
| 88 | Optimal dynamic detection of explosives. Proceedings of SPIE, 2011, , . | 0.8 | 1 |
| 89 | Optimal coherent control methods for explosives detection. Proceedings of SPIE, 2012, , . | 0.8 | 1 |
| 90 | Nonlinear resonant ultrasound spectroscopy for nondestructive evaluation of thermally aged small pressed pellets. AIP Conference Proceedings, 2019, , . | 0.4 | 1 |

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| 91 | Coherent Raman Scattering in High-Pressure/High Temperature Fluids: An Overview. Springer Proceedings in Physics, 1992, , 286-310. | 0.2 | 1 |
| 92 | Ultrafast Optical Measurements of Shocked Materials. , 2007, , 159-184. | | 0 |
| 93 | PRESSING INDUCED POLYMORPHIC PHASE TRANSITION IN SUBMICRON-SIZED GAMMA-HMX. , 2008, , . | | 0 |
| 94 | UNRAVELING SHOCK-INDUCED CHEMISTRY USING ULTRAFAST LASERS. , 2009, , . | | 0 |
| 95 | Rapid, wide bandwidth pulsed cavity ringdown spectroscopy in the mid infrared. , 2013, , . | | 0 |
| 96 | Section III: Methods 2: NMR. , 2014, , 183-192. | | 0 |
| 97 | Section VI: Methods 5: Surface Analysis. , 2014, , 699-708. | | 0 |
| 98 | Probing dynamic processes in explosives and propellants â€“ science issues. AIP Conference Proceedings, 2018, , . | 0.4 | 0 |
| 99 | Vibrational spectroscopy of shock compressed condensed phase nitrous oxide: Frequency shifts in the Î½1 mode. Journal of Applied Physics, 2020, 128, 155902. | 2.5 | 0 |
| 100 | Selective detection using the Gerchberg-Saxton algorithm and optimal coherent anti-Stokes Raman spectroscopy. , 2016, , . | | 0 |
| 101 | A comparison of infrared, Raman, and coherent Raman spectroscopies in studies of shock-induced chemistry. AIP Conference Proceedings, 2020, , . | 0.4 | 0 |