# Hergen Eilers

List of Publications by Year
in descending order

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Version: 2024-02-01

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|---|---|---|---|
| 98 papers | 2,056 citations | 279798 23 h-index | 254184 43 g-index |
| 98 all docs | 98 docs citations | 98 times ranked | 1908 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Spectra and dynamics of monoclinic Eu2O3 and Eu3+:Y2O3 nanocrystals. Journal of Luminescence, 1997, 75, 1-10. | 3.1 | 174 |
| 2 | Laser spectroscopy of nanocrystalline Eu2O3 and Eu3+:Y2O3. Chemical Physics Letters, 1996, 251, 74-78. | 2.6 | 154 |
| 3 | Saturation of 1.064 Î¼m absorption in Cr,Ca:Y3Al5O12 crystals. Applied Physics Letters, 1992, 61, 2958-2960. | 3.3 | 153 |
| 4 | Spectroscopy and dynamics ofCr4+:Y3Al5O12. Physical Review B, 1994, 49, 15505-15513. | 3.2 | 129 |
| 5 | Fabrication, optical transmittance, and hardness of IR-transparent ceramics made from nanophase yttria. Journal of the European Ceramic Society, 2007, 27, 4711-4717. | 5.7 | 92 |
| 6 | Performance of a Cr:YAG laser. IEEE Journal of Quantum Electronics, 1993, 29, 2508-2512. | 1.9 | 86 |
| 7 | Large broadband visible to infrared plasmonic absorption from Ag nanoparticles with a fractal structure embedded in a Teflon AFÂ® matrix. Applied Physics Letters, 2006, 88, 013103. | 3.3 | 79 |
| 8 | From silver nanoparticles to thin films: Evolution of microstructure and electrical conduction on glass substrates. Journal of Physics and Chemistry of Solids, 2009, 70, 459-465. | 4.0 | 76 |
| 9 | Synthesis of nanophase ZnO, Eu2O3, and ZrO2 by gas-phase condensation with cw-CO2 laser heating. Materials Letters, 1995, 24, 261-265. | 2.6 | 71 |
| 10 | Infrared and photoelectron spectroscopy study of vapor phase deposited poly (3-hexylthiophene). Applied Surface Science, 2009, 255, 8593-8597. | 6.1 | 51 |
| 11 | Electrical conductivity of thin-film composites containing silver nanoparticles embedded in a dielectric fluoropolymer matrix. Thin Solid Films, 2008, 517, 575-581. | 1.8 | 50 |
| 12 | Near infrared luminescence properties of the laser material Cr: Y2SiO5. Journal of Luminescence, 1993, 55, 293-301. | 3.1 | 46 |
| 13 | Site-selective spectroscopy of Eu3+ ions in fluoride glasses. Journal of Luminescence, 1994, 59, 81-87. | 3.1 | 41 |
| 14 | Near infrared emission at 1.35 Î¼m in Cr doped glass. Journal of Luminescence, 1994, 60-61, 119-122. | 3.1 | 39 |
| 15 | Spectroscopic Properties of Nanophase Eu-Doped ZrO<sub>2</sub> and Its Potential Application for Fast Temperature Sensing Under Extreme Conditions. Journal of Physical Chemistry C, 2012, 116, 21629-21634. | 3.1 | 37 |
| 16 | Effect of particle/grain size on the optical properties of Y2O3:Er,Yb. Journal of Alloys and Compounds, 2009, 474, 569-572. | 5.5 | 35 |
| 17 | Correlation of optical properties and temperature-induced irreversible phase transitions in europium-doped yttrium carbonate nanoparticles. Journal of Solid State Chemistry, 2011, 184, 3280-3288. | 2.9 | 32 |
| 18 | Photodegradation and self-healing in a Rhodamine 6G dye and $$hbox {Y}_{2}hbox {O}_{3}$$ nanoparticle-doped polyurethane random laser. Applied Physics B: Lasers and Optics, 2015, 120, 1-12. | 2.2 | 32 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Stabilization of tetragonal phase in ZrO2:Eu by rapid thermal heating. Chemical Physics Letters, 2011, 515, 122-126. | 2.6 | 28 |
| 20 | Fast Pyroprobe-Heating-Induced Structural Changes of Y<sub>2</sub>O<sub>3</sub>:Eu Precursors and Their Optical Signatures. Journal of Physical Chemistry C, 2012, 116, 1687-1693. | 3.1 | 26 |
| 21 | Self-healing organic-dye-based random lasers. Optics Letters, 2015, 40, 577. | 3.3 | 25 |
| 22 | Synthesis and characterization of nanophase yttria co-doped with erbium and ytterbium. Materials Letters, 2006, 60, 214-217. | 2.6 | 24 |
| 23 | Microgenetic optimization algorithm for optimal wavefront shaping. Applied Optics, 2015, 54, 1485. | 1.8 | 24 |
| 24 | Temperature-Dependent Phase Changes in Multicolored Er<sub>x</sub>Yb<sub>y</sub>Zr<sub>1â€“xâ€“y</sub>O<sub>2</sub>/Eu<sub>0.02</sub>Y<sub>1.98</sub> Core/Shell Nanoparticles. Journal of Physical Chemistry C, 2013, 117, 14427-14434. | 4.2 | 22 |
| 25 | Synthesis of silver/SiO2/Eu:Lu2O3 coreâ€“shell nanoparticles and their polymer nanocomposites. Powder Technology, 2011, 210, 157-166. | 4.2 | 20 |
| 26 | Light-induced structural changes in Eu-doped (Pb,La)(Zr,Ti)O3 ceramics. Applied Physics Letters, 2011, 98, 171906. | 3.3 | 20 |
| 27 | <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si0034.gif" overflow="scroll"><mml:msup><mml:mrow><mml:mi>Dy</mml:mi></mml:mrow><mml:mrow><mml:mn>3</mml:mn><mml:mo>+</ yttrium complex molecular crystals for two-color thermometry in heterogeneous materials. Journal of Luminescence, 2017, 188, 238-245. | 3.1 | 20 |
| 28 | Initial tamper tests of novel tamper-indicating optical physical unclonable functions. Applied Optics, 2017, 56, 2863. | 2.1 | 20 |
| 29 | Photoelastic effect inTi3+-doped sapphire. Physical Review B, 1992, 45, 9604-9610. | 3.2 | 19 |
| 30 | Spectroscopic properties of Cr^4+:Lu_3Al_5O_12. Optics Letters, 1993, 18, 1928. | 3.3 | 19 |
| 31 | Stress effects on the fluorescence spectra of tetravalent chromium in some crystalline hosts. Journal of Luminescence, 1994, 59, 279-287. | 3.1 | 19 |
| 32 | Teflon AF/Ag nanocomposites with tailored optical properties. Journal of Materials Research, 2006, 21, 2168-2171. | 2.6 | 19 |
| 33 | Effect of experimental parameters on optimal transmission of light through opaque media. Physical Review A, 2014, 90, . | 2.5 | 19 |
| 34 | Synthesis and characterization of CO2-laser-evaporated ZnS:Mn thin films. Materials Letters, 2008, 62, 967-969. | 2.6 | 18 |
| 35 | Origin of the NIR emission in Cr-doped forsterite, Y 3 Al 5 O 12 and Y 2 SiO 5. Journal of Luminescence, 1994, 60-61, 158-161. | 3.1 | 17 |
| 36 | Photoemission Spectroscopy and Atomic Force Microscopy Investigation of Vapor-Phase Codeposited Silver/Poly(3-hexylthiophene) Composites. ACS Applied Materials & Interfaces, 2009, 1, 2721-2728. | 8.0 | 17 |

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|---|---|---|---|
| 37 | Random lasing and reversible photodegradation in disperse orange 11 dye-doped PMMA with dispersed ZrO<sub>2</sub>nanoparticles. Journal of Optics (United Kingdom), 2016, 18, 015403. | 2.2 | 16 |
| 38 | The optical center MnO3â‾'4 in Y2SiO5:Mn, X (Xî—»Al, Ca). Chemical Physics Letters, 1993, 213, 163-167. | 2.6 | 15 |
| 39 | Fluorescence lifetime modification in Eu:Lu2O3 nanoparticles in the presence of silver nanoparticles. Journal of Alloys and Compounds, 2010, 500, 96-101. | 5.5 | 15 |
| 40 | Observation of avalanche-like behavior in Tm 3+ : Y 2 O 3. Journal of Luminescence, 1994, 60-61, 668-671. | 3.1 | 14 |
| 41 | Synthesis and characterizations of spherical Eu:La2O3 and related core/shell nanoparticles. Powder Technology, 2015, 271, 255-261. | 4.2 | 14 |
| 42 | The near-infrared emission of Cr:Mn2SiO4 and Cr:MgCaSiO4. Chemical Physics Letters, 1993, 212, 109-112. | 2.6 | 13 |
| 43 | Effect of experimental parameters on optimal reflection of light from opaque media. Physical Review A, 2016, 93, . | 2.5 | 13 |
| 44 | Potential interference mechanism for the detection of explosives via laser-based standoff techniques. Applied Physics B: Lasers and Optics, 2012, 106, 473-482. | 2.2 | 12 |
| 45 | T-jump pyrolysis and combustion of diisopropyl methylphosphonate. Combustion and Flame, 2019, 199, 69-84. | 5.2 | 12 |
| 46 | Spectroscopic determination of thermal impulse in sub-second heating events using lanthanide-doped oxide precursors and phenomenological modeling. Journal of Applied Physics, 2016, 120, 083102. | 2.5 | 11 |
| 47 | Low-threshold and narrow linewidth diffusive random lasing in rhodamine 6G dye-doped polyurethane with dispersed ZrO_2 nanoparticles. Journal of the Optical Society of America B: Optical Physics, 2014, 31, 2363. | 2.1 | 10 |
| 48 | Irreversible phase transitions due to laser-based T-jump heating of precursor Eu:ZrO2/Tb:Y2O3 core/shell nanoparticles. Journal of Solid State Chemistry, 2015, 229, 350-357. | 2.9 | 10 |
| 49 | Fiber-based optical thermocouples for fast temperature sensing in extreme environments. Optical Engineering, 2019, 58, 1. | 1.0 | 10 |
| 50 | Optical and Morphological Characterization of Tb0.01Zr0.99O2/(Precursor Eu0.02Y1.98O3) Core/Shell Nanoparticles as Temperature Sensors in Fast Heating Events. Journal of Physical Chemistry C, 2014, 118, 5563-5569. | 3.1 | 9 |
| 51 | Sub-second laser heating of thermal impulse sensors. AIP Conference Proceedings, 2017, , . | 0.4 | 9 |
| 52 | Stability of optimal-wave-front-sample coupling under sample translation and rotation. Physical Review A, 2015, 91, . | 2.5 | 8 |
| 53 | UV and 532 nm Photo-Dissociation of 2-Nitrotoluene: Observation of Electronically-Excited NO; Emission from Carbon (I); N2â€"NO Energy Transfer; and Stabilization of 2-Nitrotoluene-Ar Clusters. Applied Physics B: Lasers and Optics, 2012, 108, 189-196. | 2.2 | 7 |
| 54 | Two-color thermosensors based on [Y $$_{1-x}$$ 1 - x Dy $$_x$$ x (acetylacetonate) $$_3$$ 3 (1,10-phenanthroline)] molecular crystals. Applied Physics B: Lasers and Optics, 2017, 123, 1. | 2.2 | 7 |

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|---|---|---|---|
| 55 | Genetic algorithms for focusing inside opaque media. Journal of Optics (United Kingdom), 2020, 22, 085601. | 2.2 | 7 |
| 56 | Optically induced lensing effects in Nd^3+-doped laser glass measured by photothermal beam-deflection spectroscopy. Optics Letters, 1992, 17, 213. | 3.3 | 6 |
| 57 | Effects of uniaxial stress on the metastable level in Cr4+: Y2SiO5. Optics Communications, 1994, 106, 218-222. | 2.1 | 6 |
| 58 | Irreversible phase transitions in doped metal oxides for use as temperature sensors in explosions. AIP Conference Proceedings, 2012, , . | 0.4 | 6 |
| 59 | Photoluminescence spectroscopy of 2-nitrotoluene and its photo and photothermal decomposition derivatives. Journal of Photochemistry and Photobiology A: Chemistry, 2013, 268, 50-57. | 3.9 | 6 |
| 60 | Structural and spectroscopic characterization of irreversible phase changes in rapidly heated precursors of europium-doped titania nanoparticles. Journal of Solid State Chemistry, 2018, 258, 15-23. | 2.9 | 6 |
| 61 | Soluble Sm-based ternary complexes for non-contact molecular thermometry. Journal of Luminescence, 2018, 204, 341-348. | 3.1 | 6 |
| 62 | Luminescent sensors for tracking spatial particle distributions in an explosion. AIP Conference Proceedings, 2017, , . | 0.4 | 5 |
| 63 | Spectroscopic Signatures of Sub-Second Laser-Calcined Dy‹sup›3+‹/sup›-Doped Oxide Precursors for Use in ex Situ Thermal Impulse Sensors. Journal of Physical Chemistry C, 2017, 121, 20955-20966. | 3.1 | 5 |
| 64 | Nanoscale Ex Situ Thermal Impulse Sensors for Structural Fire Forensics. Applied Spectroscopy, 2018, 72, 1310-1321. | 2.2 | 5 |
| 65 | Temperature-dependent beam-deflection spectroscopy of Ti^3+ -doped sapphire. Journal of the Optical Society of America B: Optical Physics, 1993, 10, 584. | 2.1 | 4 |
| 66 | Synthesis and characterization of metal-oxide nanocrystals prepared byCO[sub 2]-laser-heated vaporization/condensation. Journal of the Society for Information Display, 1996, 4, 213. | 2.1 | 4 |
| 67 | Spectroscopic observation of neutral carbon during photodissociation of explosive-related compounds in the vapor phase. Applied Optics, 2013, 52, 7083. | 1.8 | 4 |
| 68 | Optical Signatures of Disordered Materials for Authentication Applications. , 2014, , . | | 4 |
| 69 | A factorial design approach for pressureless sintering in air of (Pb,La)(Zr,Ti)O3 synthesized via coprecipitation of oxideâ€“alkoxides. Ceramics International, 2012, 38, 775-786. | 4.8 | 3 |
| 70 | Spatial Light Modulator Controlled Random Lasing in Rhodamine 6G Dye-Doped Polyurethane with Dispersed ZrO2 Nanoparticles.. , 2014, , . | | 3 |
| 71 | Monitoring Sub-surface Chemical Reactions in Heterogeneous Materials Using Wavefront-shaping-assisted Bidirectional Focusing. Optics Letters, 2022, 47, 2036-2039. | 3.3 | 3 |
| 72 | Laser-induced acoustic waves and index of refraction changes in Ti3+- doped sapphire. Optical Materials, 1992, 1, 311-315. | 3.6 | 2 |

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| 73 | A comparison of pulsed and continuous lasers for highâ€temperature Raman measurements of anhydrite. Journal of Raman Spectroscopy, 2018, 49, 862-871. | 2.5 | 2 |
| 74 | Thermal impulse sensors for use in explosions. AIP Conference Proceedings, 2018, , . | 0.4 | 2 |
| 75 | Raman spectroscopy of oxygen carrier particles in harsh environments. , 2018, , . | | 2 |
| 76 | Effect of experimental parameters on wavefront-shaping-assisted bidirectional focusing in opaque media. Journal of Applied Physics, 2022, 131, 213103. | 2.5 | 2 |
| 77 | <title>Resonant microcavity projection displays</title>. , 1997, , . | | 1 |
| 78 | <title>Avionic applications of resonant microcavity anodes</title>. , 1999, , . | | 1 |
| 79 | Modeling ex-situ thermal impulse sensor responses to non-isothermal heating profiles. SN Applied Sciences, 2019, 1, 1. | 2.9 | 1 |
| 80 | Two-color thermometric imaging of heterogeneous materials during pulsed laser heating. Applied Physics B: Lasers and Optics, 2020, 126, 1. | 2.2 | 1 |
| 81 | Chemically bonded thermal impulse sensors for use in extreme environments. Journal of Applied Physics, 2020, 127, 055102. | 2.5 | 1 |
| 82 | Refractive index changes in Ti3+-doped glass. Optics Communications, 1993, 101, 188-191. | 2.1 | 0 |
| 83 | Synthesis and consolidation of nanophase yttria (Y 2 O 3 ). , 2005, , . | | 0 |
| 84 | Eye-safe Er,Yb:Y 2 O 3 ceramic laser materials. , 2005, , . | | 0 |
| 85 | Nanosized Thermosensors for Use in Explosions. Materials Research Society Symposia Proceedings, 2013, 1519, 1. | 0.1 | 0 |
| 86 | Er,Yb:ZrO<sub>2</sub>/Eu:Y<sub>2</sub>O<sub>3</sub> core/shell assemblies as potential temperature sensors in explosions. Journal of Physics: Conference Series, 2014, 500, 142012. | 0.4 | 0 |
| 87 | Observation of atomic carbon during photodissociation of nitrotoluenes in the vapor phase. Proceedings of SPIE, 2014, , . | 0.8 | 0 |
| 88 | Initial mechanisms for the dissociation of carbon from electronically-excited nitrotoluene molecules. AIP Advances, 2017, 7, 125120. | 1.3 | 0 |
| 89 | Burn Chamber Test of Ex Situ Thermal Impulse Sensors. Applied Spectroscopy, 2020, 74, 515-524. | 2.2 | 0 |
| 90 | Reversible photodegradation of organic-dye-based random lasers. , 2015, , . | | 0 |

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|---|---|---|---|
| 91 | Structural fire forensics: using optically active nanoparticles to determine a fireâ€™s thermal impulse. , 2016, , . | | 0 |
| 92 | Spectroscopic Changes of Cr3+Doped Al2O3 Precursors Due to Irreversible Phase Changes During Subsecond Laser Heating. , 2016, , . | | 0 |
| 93 | Mimicking explosive heating profiles: feedback controlled sub-second laser heating using a three-color NIR pyrometer. , 2016, , . | | 0 |
| 94 | Fiber-based Optical Thermocouples for In-Situ Temperature Sensing in Extreme Environments. , 2017, , . | | 0 |
| 95 | Raman Spectroscopy for the On Line Analysis of Oxidation States of Oxygen Carrier Particles. , 2017, , . | | 0 |
| 96 | Authentication via wavefront-shaped optical responses. , 2018, , . | | 0 |
| 97 | Optical thermocouples for explosive fireballs. AIP Conference Proceedings, 2020, , . | 0.4 | 0 |
| 98 | Feedback-Assisted Wavefront Shaping for Monitoring Chemical Reactions Inside Opaque Media. , 2020, , . | | 0 |