# Herman L Offerhaus

List of Publications by Year
in descending order



| 123 | 3,460 | 147726 | 149623 |
|---|---|---|---|
| papers | citations | 31 h-index | 56 g-index |

| 128 | 128 | 128 | 3364 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Hexagonally Poled Lithium Niobate: A Two-Dimensional Nonlinear Photonic Crystal. Physical Review Letters, 2000, 84, 4345-4348. | 2.9 | 468 |
| 2 | Passively Q-switched 01-mJ fiber laser system at 153 ?m. Optics Letters, 1999, 24, 388. | 1.7 | 225 |
| 3 | High-energy, high-power ytterbium-doped Q-switched fiber laser. Optics Letters, 2000, 25, 37. | 1.7 | 172 |
| 4 | Raman microscopy for cellular investigations â€" From single cell imaging to drug carrier uptake visualization. Advanced Drug Delivery Reviews, 2015, 89, 71-90. | 6.6 | 129 |
| 5 | High-energy single-transverse-mode Q-switched fiber laser based on a multimode large-mode-area erbium-doped fiber. Optics Letters, 1998, 23, 1683. | 1.7 | 124 |
| 6 | Large Mode Area Fibers for High Power Applications. Optical Fiber Technology, 1999, 5, 185-196. | 1.4 | 124 |
| 7 | Characteristics of Q-switched cladding-pumped ytterbium-doped fiber lasers with different high-energy fiber designs. IEEE Journal of Quantum Electronics, 2001, 37, 199-206. | 1.0 | 121 |
| 8 | Chemical Imaging of Oral Solid Dosage Forms and Changes upon Dissolution Using Coherent Anti-Stokes Raman Scattering Microscopy. Analytical Chemistry, 2009, 81, 2085-2091. | 3.2 | 89 |
| 9 | Skin penetration behavior of lipid-core nanocapsules for simultaneous delivery of resveratrol and curcumin. European Journal of Pharmaceutical Sciences, 2015, 78, 204-213. | 1.9 | 85 |
| 10 | Label-Free Prostate Cancer Detection by Characterization of Extracellular Vesicles Using Raman Spectroscopy. Analytical Chemistry, 2018, 90, 11290-11296. | 3.2 | 82 |
| 11 | Classifying Raman spectra of extracellular vesicles based on convolutional neural networks for prostate cancer detection. Journal of Raman Spectroscopy, 2020, 51, 293-300. | 1.2 | 79 |
| 12 | Photoionization Microscopy. Physical Review Letters, 2002, 88, 133001. | 2.9 | 77 |
| 13 | A magnifying lens for velocity map imaging of electrons and ions. Review of Scientific Instruments, 2001, 72, 3245-3248. | 0.6 | 68 |
| 14 | Shot noise limited heterodyne detection of CARS signals. Optics Express, 2007, 15, 15207. | 1.7 | 67 |
| 15 | A route to sub-diffraction-limited â€˜CARS Microscopy. Optics Express, 2009, 17, 22632. | 1.7 | 63 |
| 16 | Vibrational Phase Contrast Microscopy by Use of Coherent Anti-Stokes Raman Scattering. Physical Review Letters, 2009, 103, 043905. | 2.9 | 63 |
| 17 | Spatial alignment of diatomic molecules in intense laser fields: I. Experimental results. Journal of Physics B: Atomic, Molecular and Optical Physics, 2001, 34, 4919-4938. | 0.6 | 59 |
| 18 | Background free CARS imaging by phase sensitive heterodyne CARS. Optics Express, 2008, 16, 15863. | 1.7 | 59 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | 25 kHz narrow spectral bandwidth of a wavelength tunable diode laser with a short waveguide-based external cavity. Laser Physics Letters, 2013, 10, 015804. | 0.6 | 57 |
| 20 | Application of a time-resolved event counting technique in velocity map imaging. Review of Scientific Instruments, 2002, 73, 4206-4213. | 0.6 | 56 |
| 21 | Pharmaceutical applications of non-linear imaging. International Journal of Pharmaceutics, 2011, 417, 163-172. | 2.6 | 55 |
| 22 | Passive Q-switching of fiber lasers using a broadband liquefying gallium mirror. Applied Physics Letters, 1999, 74, 3619-3621. | 1.5 | 49 |
| 23 | Creating Focused Plasmons by Noncollinear Phasematching on Functional Gratings. Nano Letters, 2005, 5, 2144-2148. | 4.5 | 44 |
| 24 | Noncritical phase-matched lithium triborate optical parametric oscillator for high resolution coherent anti-Stokes Raman scattering spectroscopy and microscopy. Applied Physics Letters, 2006, 89, 251116. | 1.5 | 41 |
| 25 | Spatially dependent Rabi oscillations: An approach to sub-diffraction-limited coherent anti-Stokes Raman-scattering microscopy. Physical Review A, 2010, 81, . | 1.0 | 40 |
| 26 | In situ dissolution analysis using coherent anti-Stokes Raman scattering (CARS) and hyperspectral CARS microscopy. European Journal of Pharmaceutics and Biopharmaceutics, 2013, 85, 1141-1147. | 2.0 | 39 |
| 27 | Axonâ€Myelin Unit Blistering as Early Event in <scp>MS</scp> Normal Appearing White Matter. Annals of Neurology, 2021, 89, 711-725. | 2.8 | 39 |
| 28 | High-gain waveguide amplifiers in Si<sub>3</sub>N<sub>4</sub> technology via double-layer monolithic integration. Photonics Research, 2020, 8, 1634. | 3.4 | 36 |
| 29 | Power scaling in passively mode-locked large-mode area fiber lasers. IEEE Photonics Technology Letters, 1998, 10, 1718-1720. | 1.3 | 35 |
| 30 | Application of spectral phase shaping to high resolution CARS spectroscopy. Optics Express, 2008, 16, 7985. | 1.7 | 35 |
| 31 | Ground-state depletion for subdiffraction-limited spatial resolution in coherent anti-Stokes Raman scattering microscopy. Physical Review A, 2012, 86, . | 1.0 | 33 |
| 32 | Wide wavelength-tuning of a double-clad Yb3+-doped fiber laser based on a fiber Bragg grating array. Laser Physics Letters, 2007, 4, 880-883. | 0.6 | 32 |
| 33 | Rapid identification of heterogeneous mixture components with hyperspectral coherent antiâ€Stokes Raman scattering imaging. Journal of Raman Spectroscopy, 2012, 43, 651-655. | 1.2 | 32 |
| 34 | Accurate and unbiased estimation of power-law exponents from single-emitter blinking data. Journal of Chemical Physics, 2006, 125, 204713. | 1.2 | 31 |
| 35 | Spatial alignment of diatomic molecules in intense laser fields: II. Numerical modelling. Journal of Physics B: Atomic, Molecular and Optical Physics, 2001, 34, 4939-4956. | 0.6 | 26 |
| 36 | COHERENT ANTI-STOKES RAMAN SCATTERING MICROSCOPY TO MONITOR DRUG DISSOLUTION IN DIFFERENT ORAL PHARMACEUTICAL TABLETS. Journal of Innovative Optical Health Sciences, 2009, 02, 37-43. | 0.5 | 26 |

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| 37 | Visualizing Resonances in the Complex Plane with Vibrational Phase Contrast Coherent Anti-Stokes Raman Scattering. Analytical Chemistry, 2010, 82, 7656-7659. | 3.2 | 26 |
| 38 | Stimulated-emission pumping enabling sub-diffraction-limited spatial resolution in coherent anti-Stokes Raman scattering microscopy. Physical Review A, 2013, 87, . | 1.0 | 26 |
| 39 | Parametric oscillator directly pumped by a 155-Âµm erbium-fiber laser. Optics Letters, 1999, 24, 975. | 1.7 | 25 |
| 40 | A theoretical investigation of superâ€resolution CARS imaging via coherent and incoherent saturation of transitions. Journal of Raman Spectroscopy, 2011, 42, 1854-1858. | 1.2 | 25 |
| 41 | Microfluidics control the ballistic energy of thermocavitation liquid jets for needle-free injections. Journal of Applied Physics, 2020, 127, . | 1.1 | 24 |
| 42 | Enhanced surface plasmon polariton propagation length using a buried metal grating. Journal of Applied Physics, 2011, 109, . | 1.1 | 23 |
| 43 | CARS microscopy as a tool for studying the distribution of micronised drugs in adhesive mixtures for inhalation. Journal of Raman Spectroscopy, 2014, 45, 495-500. | 1.2 | 22 |
| 44 | Large bandwidth, highly efficient optical gratings through high index materials. Optics Express, 2009, 17, 4268. | 1.7 | 21 |
| 45 | Phaseâ€shaping strategies for coherent antiâ€Stokes Raman scattering. Journal of Raman Spectroscopy, 2011, 42, 1859-1863. | 1.2 | 20 |
| 46 | Cancer-ID: Toward Identification of Cancer by Tumor-Derived Extracellular Vesicles in Blood. Frontiers in Oncology, 2020, 10, 608. | 1.3 | 20 |
| 47 | Coherent anti-Stokes Raman scattering microscopy driving the future of loaded mesoporous silica imaging. Acta Biomaterialia, 2014, 10, 4870-4877. | 4.1 | 17 |
| 48 | In-chip direct laser writing of a centimeter-scale acoustic micromixer. Journal of Micro/Nanolithography, MEMS, and MOEMS, 2015, 14, 1. | 1.0 | 17 |
| 49 | Single-frequency operation of a broad-area laser diode by injection locking of a complex spatial mode via a double phase conjugate mirror. Optics Letters, 2006, 31, 1061. | 1.7 | 16 |
| 50 | Background-Free Nonlinear Microspectroscopy with Vibrational Molecular Interferometry. Physical Review Letters, 2011, 107, 253902. | 2.9 | 15 |
| 51 | All solid-state diode pumped Nd:YAG MOPA with stimulated Brillouin phase conjugate mirror. Optics Communications, 1996, 128, 61-65. | 1.0 | 14 |
| 52 | Chemically selective imaging by spectral phase shaping for broadband CARS around 3000 cm^â^'1. Journal of the Optical Society of America B: Optical Physics, 2009, 26, 559. | 0.9 | 14 |
| 53 | Polyglutamine Aggregate Structure In Vitro and In Vivo; New Avenues for Coherent Anti-Stokes Raman Scattering Microscopy. PLoS ONE, 2012, 7, e40536. | 1.1 | 14 |
| 54 | Near-field observation of spatial phase shifts associated with Goos-HÃnschen and Surface Plasmon Resonance effects. Optics Express, 2008, 16, 1958. | 1.7 | 13 |

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| 55 | Compact high-resolution spectral phase shaper. Review of Scientific Instruments, 2005, 76, 123105. | 0.6 | 12 |
| 56 | Exploring, tailoring, and traversing the solution landscape of a phase-shaped CARS process. Optics Express, 2010, 18, 2695. | 1.7 | 12 |
| 57 | Imaging local acoustic pressure in microchannels. Applied Optics, 2015, 54, 6482. | 2.1 | 12 |
| 58 | Highâ€resolution narrowband CARS spectroscopy in the spectral fingerprint region. Journal of Raman Spectroscopy, 2009, 40, 1229-1233. | 1.2 | 11 |
| 59 | Heterodyne interferometric polarization coherent antiâ€Stokes Raman scattering (HIPâ€CARS) spectroscopy. Journal of Raman Spectroscopy, 2010, 41, 1678-1681. | 1.2 | 11 |
| 60 | A hybrid semiconductor-glass waveguide laser. Proceedings of SPIE, 2014, , . | 0.8 | 11 |
| 61 | Comparison of three types of fiber optic sensors for temperature monitoring in a groundwater flow simulator. Sensors and Actuators A: Physical, 2021, 331, 112682. | 2.0 | 11 |
| 62 | Intracellular Delivery of Poorly Soluble Polyphenols: Elucidating the Interplay of Self-Assembling Nanocarriers and Human Chondrocytes. Analytical Chemistry, 2016, 88, 7014-7022. | 3.2 | 10 |
| 63 | Possibilities for Groundwater Flow Sensing with Fiber Bragg Grating Sensors. Sensors, 2019, 19, 1730. | 2.1 | 10 |
| 64 | Tethering Cells via Enzymatic Oxidative Crosslinking Enables Mechanotransduction in Nonâ€Cellâ€Adhesive Materials. Advanced Materials, 2021, 33, e2102660. | 11.1 | 10 |
| 65 | Hyperspectral imaging in biomedical applications. Journal of Optics (United Kingdom), 2019, 21, 010202. | 1.0 | 9 |
| 66 | Identification and quantification of 16 inorganic ions in water by Gaussian curve fitting of near-infrared difference absorbance spectra. Applied Optics, 2015, 54, 5937. | 2.1 | 8 |
| 67 | Single shot beam quality (M2) measurement using a spatial Fourier transform of the near field. Optics Communications, 1998, 151, 65-68. | 1.0 | 6 |
| 68 | Vibration transfers to measure the performance of vibration isolated platforms on site using background noise excitation. Review of Scientific Instruments, 2011, 82, 065111. | 0.6 | 6 |
| 69 | Shot noise limited heterodyne detection of CARS signals. , 2008, , . | | 5 |
| 70 | Tailoring a coherent control solution landscape by linear transforms of spectral phase basis. Optics Express, 2010, 18, 973. | 1.7 | 5 |
| 71 | Coherent control of vibrational transitions: Discriminating molecules in mixtures. Faraday Discussions, 2011, 153, 227. | 1.6 | 5 |
| 72 | Phase aspects of (broadband) stimulated Raman scattering. Reviews in Analytical Chemistry, 2012, 31, 1-6. | 1.5 | 5 |

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| 73 | High precision wavelength estimation method for integrated optics. Optics Express, 2013, 21, 17042. | 1.7 | 5 |
| 74 | In plantaimaging of Î”9-tetrahydrocannabinolic acid inCannabis sativa L.with hyperspectral coherent anti-Stokes Raman scattering microscopy. Journal of Biomedical Optics, 2013, 18, 046009. | 1.4 | 5 |
| 75 | Q-factor measurements through injection locking of a semiconductor-glass hybrid laser with unknown intracavity losses. Optics Letters, 2014, 39, 1748. | 1.7 | 5 |
| 76 | Advances in nonlinear optical spectroscopies: a historical perspective of developments and applications presented at ECONOS. Journal of Raman Spectroscopy, 2016, 47, 1111-1123. | 1.2 | 5 |
| 77 | Micro-machining workstation for a diode pumped Nd:YAG high-brightness laser system. Review of Scientific Instruments, 1998, 69, 2118-2119. | 0.6 | 4 |
| 78 | Holographic injection locking of a broad area laser diode via a photorefractive thin-film device. Optics Express, 2007, 15, 17587. | 1.7 | 4 |
| 79 | 73-nm tuning of a double-clad Yb3+-doped fiber laser based on a hybrid array. Laser Physics, 2008, 18, 353-356. | 0.6 | 4 |
| 80 | Dynamic Consolidation Measurements in a Well Field Using Fiber Bragg Grating Sensors. Sensors, 2019, 19, 4403. | 2.1 | 4 |
| 81 | Study on multiple waveguide platforms for waveguide integrated Raman spectroscopy. OSA Continuum, 2020, 3, 1322. | 1.8 | 4 |
| 82 | Fundamental mode intensity evolution in tapered optical fibres. Laser Physics, 2020, 30, 126204. | 0.6 | 4 |
| 83 | Modeling of mode locking in a laser with spatially separate gain media. Optics Express, 2010, 18, 22996. | 1.7 | 3 |
| 84 | Large scale scanning probe microscope: Making the shear-force scanning visible. American Journal of Physics, 2010, 78, 562-566. | 0.3 | 3 |
| 85 | Imaging of surface plasmon polariton interference using phase-sensitive photon scanning tunneling microscope. Applied Physics A: Materials Science and Processing, 2011, 103, 673-676. | 1.1 | 3 |
| 86 | Coherent anti-Stokes Raman Scattering (CARS) Microscopy Visualizes Pharmaceutical Tablets During Dissolution. Journal of Visualized Experiments, 2014, , . | 0.2 | 3 |
| 87 | Hybrid imaging of fluorescently labeled cancer drugs and label-free four-wave mixing microscopy of cancer cells and tissues. Journal of Biomedical Optics, 2015, 20, 086006. | 1.4 | 3 |
| 88 | Early interferometric detection of rolling contact fatigue induced micro-cracking in railheads. NDT and E International, 2017, 86, 14-19. | 1.7 | 3 |
| 89 | Numerical study of submicroparticle acoustophoresis using higher-order modes in a rectangular microchannel. Journal of Sound and Vibration, 2018, 415, 169-183. | 2.1 | 3 |
| 90 | The light-induced structural phase transition in confining gallium and its photonic applications. Journal of Luminescence, 2000, 87-89, 646-648. | 1.5 | 2 |

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| 91 | Non-reciprocal transmission via phase conjugation in multimode optical fibres. Optics Communications, 2001, 190, 357-365. | 1.0 | 2 |
| 92 | Vibrational phase contrast CARS microscopy for quantitative analysis. , 2010, , . | | 2 |
| 93 | Design Considerations to Realize Differential Absorption-Based Optofluidic Sensors for Determination of Ionic Content in Water. IEEE Sensors Journal, 2018, 18, 6051-6058. | 2.4 | 2 |
| 94 | Nonlinear Optics Approaches Towards Subdiffraction Resolution in CARS Imaging. Neuromethods, 2014, , 291-324. | 0.2 | 2 |
| 95 | Nonlinear multispectral imaging for tumor delineation. Journal of Biomedical Optics, 2020, 25, . | 1.4 | 2 |
| 96 | Linear polarization Yb3+-doped fiber laser with novel innerclad structures. Laser Physics, 2008, 18, 1340-1343. | 0.6 | 1 |
| 97 | Background free CARS imaging by local phase detection. Proceedings of SPIE, 2009, , . | 0.8 | 1 |
| 98 | Laser induced damage reduction in single-mode fiber devices. Laser Physics, 2009, 19, 1030-1033. | 0.6 | 1 |
| 99 | Implementation of vibrational phase contrast coherent anti-Stokes Raman scattering microscopy. Applied Optics, 2011, 50, 1839. | 2.1 | 1 |
| 100 | Investigation of adaptive laser pulse shaping by direct estimation of group delay profile. Optics Communications, 2011, 284, 3748-3758. | 1.0 | 1 |
| 101 | Development and applications of nonlinear optical spectroscopy: 10th ECONOS/30th ECW meeting in Enschede, The Netherlands. Journal of Raman Spectroscopy, 2012, 43, 593-594. | 1.2 | 1 |
| 102 | Hyperspectral coherent anti-Stokes Raman scattering microscopy for in situ analysis of solid-state crystal polymorphs. Proceedings of SPIE, 2013, , . | 0.8 | 1 |
| 103 | Epi-detection of vibrational phase contrast coherent anti-Stokes Raman scattering. Optics Letters, 2014, 39, 5814. | 1.7 | 1 |
| 104 | Editorial for special issue on nano-optomechanics. Journal of Optics (United Kingdom), 2017, 19, 080401. | 1.0 | 1 |
| 105 | Role of temperature in de-mixing absorbance spectra composed of compound electrolyte solutions. Applied Optics, 2018, 57, 7871. | 0.9 | 1 |
| 106 | Optofluidic interferometry chip designs of differential NIR absorbance based sensors for identification and quantification of electrolytes. , 2016, , . | | 1 |
| 107 | Thermal effects on tapered holmium-doped fiber amplifiers. Optical Engineering, 2020, 59, 1. | 0.5 | 1 |
| 108 | Diode-pumped 1-kHz high-power Nd:YAG laser with excellent beam quality. , 1997, 3092, 29. | | 0 |

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| 109 | Engineered plasmon focusing on functional gratings. , 2005, 5840, 359. | | 0 |
| 110 | Spectral phase shaping for high resolution CARS spectroscopy around 3000 cm-1. , 2009, , . | | 0 |
| 111 | Dynamic Process Measurements in the Complex Plane with Vibrational Phase Contrast CARS. , 2010, , . | | 0 |
| 112 | Vibrational Phase Contrast CARS Imaging. , 2010, , . | | 0 |
| 113 | A common path interferometer for stimulated Raman scattering (SRS) and coherent anti-Stokes Raman scattering measurements (CARS). Proceedings of SPIE, 2012, , . | 0.8 | 0 |
| 114 | Computational optimization of phase shaped CARS. Proceedings of SPIE, 2012, , . | 0.8 | 0 |
| 115 | Background-free nonlinear microspectroscopy with vibrational molecular interferometry. , 2012, , . | | 0 |
| 116 | In situdissolution analysis of pharmaceutical dosage forms using coherent anti-Stokes Raman scattering (CARS) microscopy. Proceedings of SPIE, 2014, , . | 0.8 | 0 |
| 117 | A First Step towards Determining the Ionic Content in Water with an Integrated Optofluidic Chip Based on Near-Infrared Absorption Spectroscopy. Optics, 2020, 1, 175-190. | 0.6 | 0 |
| 118 | Temperature and Consolidation Sensing Near Drinking Water Wells Using Fiber Bragg Grating Sensors. Water (Switzerland), 2020, 12, 3572. | 1.2 | 0 |
| 119 | Femtosecond spectral phase shaping for CARS spectroscopy and imaging. Springer Series in Chemical Physics, 2009, , 523-525. | 0.2 | 0 |
| 120 | Single polarization Yb. , 2011, , . | | 0 |
| 121 | Sub-diffraction-limited spatial resolution in CARS microscopy by ground state depletion. , 2012, , . | | 0 |
| 122 | Stimulated Emission Pumping Enabling Sub-Diffraction-Limited Spatial Resolution in CARS Microscopy. , 2012, , . | | 0 |
| 123 | Analysis and modeling of CLBG using the transfer matrix method. , 2019, , . | | 0 |