

Alexey P Popov

List of Publications by Year in descending order

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Version: 2024-02-01

119
papers

2,212
citations

249298

26
h-index

299063

42
g-index

121
all docs

121
docs citations

121
times ranked

2979
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 1 | Bloodâ€™nanomaterials interactions. , 2022, , 1-40. | | 0 |
| 2 | Hemorheological alterations of red blood cells induced by 450-nm and 520-nm laser radiation. Journal of Photochemistry and Photobiology B: Biology, 2022, 230, 112438. | 1.7 | 4 |
| 3 | Dimethylammonium iodide stabilized bismuth halide perovskite photocatalyst for hydrogen evolution. Nano Research, 2021, 14, 1116-1125. | 5.8 | 34 |
| 4 | Evolution of raw meat polarizationâ€™based properties by means of Mueller matrix imaging. Journal of Biophotonics, 2021, 14, e202000376. | 1.1 | 12 |
| 5 | In vivo nano-biosensing element of red blood cell-mediated delivery. Biosensors and Bioelectronics, 2021, 175, 112845. | 5.3 | 20 |
| 6 | Skin Complications of Diabetes Mellitus Revealed by Polarized Hyperspectral Imaging and Machine Learning. IEEE Transactions on Medical Imaging, 2021, 40, 1207-1216. | 5.4 | 60 |
| 7 | In vitro influence of 520 nm diode laser irradiation on red blood cell spontaneous aggregation studied by optical tweezers and light microscopy. , 2021, , . | | 0 |
| 8 | Biodegradable Nanocarriers Resembling Extracellular Vesicles Deliver Genetic Material with the Highest Efficiency to Various Cell Types. Small, 2020, 16, e1904880. | 5.2 | 25 |
| 9 | Impact of Nanocapsules on Red Blood Cells Interplay Jointly Assessed by Optical Tweezers and Microscopy. Micromachines, 2020, 11, 19. | 1.4 | 14 |
| 10 | In-Body Communications Exploiting Light: A Proof-of-Concept Study Using Ex Vivo Tissue Samples. IEEE Access, 2020, 8, 190378-190389. | 2.6 | 3 |
| 11 | A highly efficient and safe gene delivery platform based on polyelectrolyte coreâ€™shell nanoparticles for hard-to-transfect clinically relevant cell types. Journal of Materials Chemistry B, 2020, 8, 9576-9588. | 2.9 | 23 |
| 12 | Colon cancer detection by using PoincarÃ© sphere and $2D$ polarimetric mapping of ex vivo colon samples. Journal of Biophotonics, 2020, 13, e202000082. | 1.1 | 41 |
| 13 | The advancement of blood cell research by optical tweezers. Reviews in Physics, 2020, 5, 100043. | 4.4 | 41 |
| 14 | Two-point Stokes vector diagnostic approach for characterization of optically anisotropic biological tissues. Journal Physics D: Applied Physics, 2020, 53, 395401. | 1.3 | 22 |
| 15 | Optical Tweezers in Studies of Red Blood Cells. Cells, 2020, 9, 545. | 1.8 | 82 |
| 16 | Meat freshness revealed by visible to near-infrared spectroscopy and principal component analysis. Journal of Physics Communications, 2020, 4, 095011. | 0.5 | 17 |
| 17 | Role of scattering and birefringence in phase retardation revealed by locus of Stokes vector on PoincarÃ© sphere. Journal of Biomedical Optics, 2020, 25, 1. | 1.4 | 21 |
| 18 | Wireless data transfer through biological tissues using near-infrared light: testing skull and skin phantoms. , 2020, , . | | 4 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 19 | Evaluating \hat{I}^2 -amyloidosis progression in Alzheimer's disease with Mueller polarimetry. Biomedical Optics Express, 2020, 11, 4509. | 1.5 | 43 |
| 20 | Probing the red blood cell interaction in individual cell pairs by optical tweezers. , 2020, , . | | 1 |
| 21 | The use of Stokes-Mueller polarimetry for assessment of amyloid- \hat{I}^2 progression in a mouse model of Alzheimer's disease. , 2020, , . | | 2 |
| 22 | Development of oral cancer tissue-mimicking phantom based on polyvinyl chloride plastisol and graphite for terahertz frequencies. Journal of Biomedical Optics, 2020, 25, . | 1.4 | 10 |
| 23 | Mutual interaction of red blood cells influenced by nanoparticles. Scientific Reports, 2019, 9, 5147. | 1.6 | 35 |
| 24 | Influence of Pulsed He-Ne Laser Irradiation on the Red Blood Cell Interaction Studied by Optical Tweezers. Micromachines, 2019, 10, 853. | 1.4 | 16 |
| 25 | Influence of interaction time on the red blood cell (dis)aggregation dynamics in vitro studied by optical tweezers. , 2019, , . | | 3 |
| 26 | Influence of blood pulsation on diagnostic volume in pulse oximetry and photoplethysmography measurements. Applied Optics, 2019, 58, 9398. | 0.9 | 40 |
| 27 | Hyperspectral imaging of human skin aided by artificial neural networks. Biomedical Optics Express, 2019, 10, 3545. | 1.5 | 68 |
| 28 | Optical Wireless Data Transfer Through Biotissues: Practical Evidence and Initial Results. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2019, , 191-205. | 0.2 | 4 |
| 29 | Assessment of age-related skin changes using hyperspectral polarization imaging. , 2019, , . | | 0 |
| 30 | Combined use of optical tweezers and scanning electron microscopy to reveal influence of nanoparticles on red blood cells interactions. , 2019, , . | | 0 |
| 31 | Combined multi-wavelength laser speckle contrast imaging and diffuse reflectance imaging for skin perfusion assessment. , 2019, , . | | 1 |
| 32 | Influence of blood pulsation on diagnostic volume in pulse oximetry and photoplethysmography measurements: publisher's note. Applied Optics, 2019, 58, 9688. | 0.9 | 0 |
| 33 | Speckle dynamics under ergodicity breaking. Journal Physics D: Applied Physics, 2018, 51, 155401. | 1.3 | 21 |
| 34 | Bare laser-synthesized Au-based nanoparticles as nondisturbing surface-enhanced Raman scattering probes for bacteria identification. Journal of Biophotonics, 2018, 11, e201700225. | 1.1 | 42 |
| 35 | Random networks of core-shell-like Cu-Cu ₂ O/CuO nanowires as surface plasmon resonance-enhanced sensors. Scientific Reports, 2018, 8, 4708. | 1.6 | 20 |
| 36 | Investigation of Water-free Biotissue-mimicking Phantoms in Terahertz Frequency Range. , 2018, , . | | 2 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 37 | Terahertz time-domain spectroscopy for non-invasive assessment of water content in biological samples. <i>Biomedical Optics Express</i> , 2018, 9, 2266. | 1.5 | 74 |
| 38 | Mutual interaction of red blood cells assessed by optical tweezers and scanning electron microscopy imaging. <i>Optics Letters</i> , 2018, 43, 3921. | 1.7 | 18 |
| 39 | Assisted Medication Management in Elderly Care Using Miniaturised Near-Infrared Spectroscopy. , 2018, 2, 1-24. | | 17 |
| 40 | Allocation of rhodamine-loaded nanocapsules from blood circulatory system to adjacent tissues assessed in vivo by fluorescence spectroscopy. <i>Laser Physics Letters</i> , 2018, 15, 105601. | 0.6 | 6 |
| 41 | Monitoring of temperature-mediated phase transitions of adipose tissue by combined optical coherence tomography and Abbe refractometry. <i>Journal of Biomedical Optics</i> , 2018, 23, 1. | 1.4 | 10 |
| 42 | Delivery and reveal of localization of upconversion luminescent microparticles and quantum dots in the skin in vivo by fractional laser microablation, multimodal imaging, and optical clearing. <i>Journal of Biomedical Optics</i> , 2018, 23, 1. | 1.4 | 8 |
| 43 | Investigation of speckle pattern dynamics by laser speckle contrast imaging. , 2018, , . | | 1 |
| 44 | Noninvasive control of rhodamine-loaded capsules distribution in vivo. , 2018, , . | | 0 |
| 45 | Ecophotonics: assessment of temperature gradient in aquatic organisms using up-conversion luminescent particles. <i>Quantum Electronics</i> , 2017, 47, 153-157. | 0.3 | 4 |
| 46 | Towards enhanced optical sensor performance: SEIRA and SERS with plasmonic nanostars. <i>Analyst</i> , 2017, 142, 951-958. | 1.7 | 49 |
| 47 | Surface-enhanced Raman spectroscopy for identification and discrimination of beverage spoilage yeasts using patterned substrates and gold nanoparticles. <i>Journal of Food Engineering</i> , 2017, 212, 47-54. | 2.7 | 24 |
| 48 | Impact of blood volume changes within the human skin on the diffuse reflectance measurements in visible and NIR spectral ranges. <i>Proceedings of SPIE</i> , 2017, , . | 0.8 | 1 |
| 49 | Dual mode diffraction phase microscopy for quantitative functional assessment of biological cells. <i>Laser Physics Letters</i> , 2017, 14, 105601. | 0.6 | 2 |
| 50 | Surface enhanced infrared absorption spectroscopy based on gold nanostars and spherical nanoparticles. <i>Analytica Chimica Acta</i> , 2017, 990, 141-149. | 2.6 | 45 |
| 51 | Assessment of water content in biological samples by terahertz time-domain spectroscopy. <i>Proceedings of SPIE</i> , 2017, , . | 0.8 | 0 |
| 52 | Influence of probe pressure on diffuse reflectance spectra of human skin measured in vivo. <i>Journal of Biomedical Optics</i> , 2017, 22, 1. | 1.4 | 23 |
| 53 | Optical characterization of polymeric nanocapsules interaction with the cell membrane and in vivo analysis.. , 2017, , . | | 1 |
| 54 | Imaging of subchondral bone by optical coherence tomography upon optical clearing of articular cartilage. <i>Journal of Biophotonics</i> , 2016, 9, 270-275. | 1.1 | 41 |

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|----|--|-----|-----------|
| 55 | Plasmon-Resonant Gold Nanostars With Variable Size as Contrast Agents for Imaging Applications. IEEE Journal of Selected Topics in Quantum Electronics, 2016, 22, 13-20. | 1.9 | 23 |
| 56 | Refractive index retrieval from transmittance measurements. Optik, 2016, 127, 5562-5567. | 1.4 | 1 |
| 57 | A novel WS ₂ nanowire-nanoflake hybrid material synthesized from WO ₃ nanowires in sulfur vapor. Scientific Reports, 2016, 6, 25610. | 1.6 | 21 |
| 58 | Performance Enhancement of Polymer Electrolyte MEIS Hydrogen Sensor by DC-Biasing. IEEE Sensors Journal, 2016, 16, 5292-5297. | 2.4 | 3 |
| 59 | Nanoparticle-free tissue-mimicking phantoms with intrinsic scattering. Biomedical Optics Express, 2016, 7, 2088. | 1.5 | 33 |
| 60 | Detection of <i>Listeria innocua</i> on roll-to-roll produced SERS substrates with gold nanoparticles. RSC Advances, 2016, 6, 62981-62989. | 1.7 | 23 |
| 61 | Polarization sensitive optical biopsy with diffusely reflected polarized light. , 2016, , . | | 0 |
| 62 | The effect of laser irradiation on living cells incubated with gold nanoparticles. , 2015, , . | | 2 |
| 63 | Simulation of the effect of photoprotective titanium dioxide (TiO ₂) and zinc oxide (ZnO) nanoparticles on the thermal response and optical characteristics of skin. Optics and Spectroscopy (English Translation of Optika i Spektroskopiya), 2015, 118, 668-673. | 0.2 | 7 |
| 64 | Measurements of fundamental properties of homogeneous tissue phantoms. Journal of Biomedical Optics, 2015, 20, 045004. | 1.4 | 48 |
| 65 | Spatial evolution of depolarization in homogeneous turbid media within the differential Mueller matrix formalism. Optics Letters, 2015, 40, 5634. | 1.7 | 45 |
| 66 | Optical properties of plasmon-resonant bare and silica-coated nanostars used for cell imaging. Journal of Biomedical Optics, 2015, 20, 076017. | 1.4 | 21 |
| 67 | Optical clearing of articular cartilage: a comparison of clearing agents. , 2015, , . | | 0 |
| 68 | Use of optical skin phantoms for preclinical evaluation of laser efficiency for skin lesion therapy. Journal of Biomedical Optics, 2015, 20, 085003. | 1.4 | 25 |
| 69 | In vitro terahertz monitoring of muscle tissue dehydration under the action of hyperosmotic agents. Quantum Electronics, 2014, 44, 633-640. | 0.3 | 27 |
| 70 | Application of semiconductor and upconversion nanomaterials in cosmetics, coatings, and phantoms. Proceedings of SPIE, 2014, , . | 0.8 | 4 |
| 71 | Gold nanostructures for OCT imaging of capillary flow. Proceedings of SPIE, 2014, , . | 0.8 | 4 |
| 72 | Light Propagation in NIR Spectroscopy of the Human Brain. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 289-298. | 1.9 | 40 |

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| 73 | Titania nanofibers in gypsum composites: an antibacterial and cytotoxicology study. Journal of Materials Chemistry B, 2014, 2, 1307. | 2.9 | 19 |
| 74 | THz monitoring of the dehydration of biological tissues affected by hyperosmotic agents. Physics of Wave Phenomena, 2014, 22, 169-176. | 0.3 | 29 |
| 75 | Plasmon-resonant gold nanoparticles with variable morphology as optical labels and drug carriers for cytological research. , 2013, , . | | 5 |
| 76 | Optical sensing of a pulsating liquid in a brain-mimicking phantom. Proceedings of SPIE, 2013, , . | 0.8 | 12 |
| 77 | Feasibility study of the optical imaging of a breast cancer lesion labeled with upconversion nanoparticle biocomplexes. Journal of Biomedical Optics, 2013, 18, 076004. | 1.4 | 84 |
| 78 | Two-photon-excited autofluorescence and second-harmonic generation microscopy for the visualization of penetration of TiO ₂ and ZnO nanoparticles into human tooth tissue ex vivo. , 2012, , . | | 1 |
| 79 | Glucose Sensing in Flowing Blood and Intralipid by Laser Pulse Time-of-Flight and Optical Coherence Tomography Techniques. IEEE Journal of Selected Topics in Quantum Electronics, 2012, 18, 1335-1342. | 1.9 | 13 |
| 80 | Inkjet-printed gas sensors: metal decorated WO ₃ nanoparticles and their gas sensing properties. Journal of Materials Chemistry, 2012, 22, 17878. | 6.7 | 66 |
| 81 | Photocatalytic activity of TiO ₂ nanoparticles: effect of thermal annealing under various gaseous atmospheres. Nanotechnology, 2012, 23, 475711. | 1.3 | 33 |
| 82 | Novel Printed Nanostructured Gas Sensors. Procedia Engineering, 2011, 25, 896-899. | 1.2 | 14 |
| 83 | Influence of titanium dioxide nanoparticles on skin surface temperature at sunlight irradiation. Biomedical Optics Express, 2011, 2, 3278. | 1.5 | 15 |
| 84 | Upconversion luminophores as a novel tool for deep tissue imaging. Proceedings of SPIE, 2011, , . | 0.8 | 6 |
| 85 | Laser applications in life sciences. Journal of Biophotonics, 2011, 4, 141-142. | 1.1 | 0 |
| 86 | Alteration of skin light-scattering and absorption properties by application of sunscreen nanoparticles: A Monte Carlo study. Journal of Quantitative Spectroscopy and Radiative Transfer, 2011, 112, 1891-1897. | 1.1 | 11 |
| 87 | Multilayer tissue phantoms with embedded capillary system for OCT and DOCT imaging. , 2011, , . | | 22 |
| 88 | ZnO and TiO ₂ particles: a study on nanosafety and photoprotection. Proceedings of SPIE, 2010, , . | 0.8 | 5 |
| 89 | Designing Inorganic Light-Protective Skin Nanotechnology Products. Journal of Biomedical Nanotechnology, 2010, 6, 432-451. | 0.5 | 48 |
| 90 | Biophysical mechanisms of modification of skin optical properties in the UV wavelength range with nanoparticles. Journal of Applied Physics, 2009, 105, . | 1.1 | 12 |

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|-----|--|-----|-----------|
| 91 | Effect of size of TiO ₂ nanoparticles applied onto glass slide and porcine skin on generation of free radicals under ultraviolet irradiation. Journal of Biomedical Optics, 2009, 14, 021011. | 1.4 | 26 |
| 92 | Calculation of absorption, reflectance, transmission, and depolarization of UV radiation propagating through a layer of suspension of titanium dioxide nanoparticles. Moscow University Physics Bulletin (English Translation of Vestnik Moskovskogo Universiteta, Fizika), 2009, 64, 513-518. | 0.1 | 3 |
| 93 | Interaction of sunscreen TiO ₂ nanoparticles with skin and UV light: penetration, protection, phototoxicity. , 2009, , . | | 1 |
| 94 | Separation and characterization of deoxyribonucleases from hepatopancreas of freshwater snail in normality and under in vivo model intoxication. Biochemistry (Moscow), 2008, 73, 937-942. | 0.7 | 3 |
| 95 | Effect of multiple scattering of light by titanium dioxide nanoparticles implanted into a superficial skin layer on radiation transmission in different wavelength ranges. Quantum Electronics, 2007, 37, 17-21. | 0.3 | 13 |
| 96 | <title>Optimal sizes of gold nanoparticles for laser treatment of tumors</title>. Proceedings of SPIE, 2007, 6534, 927. | 0.8 | 4 |
| 97 | Reconstruction of stratum corneum profile of porcine ear skin after tape stripping using UV/VIS spectroscopy. , 2007, , . | | 8 |
| 98 | <title>Sensing an aqueous Intralipid suspension with optical coherence tomography: reconstruction of the scattering coefficients</title>. , 2007, , . | | 1 |
| 99 | Monte Carlo calculations of UV protective properties of emulsions containing TiO ₂ , Si and SiO ₂ nanoparticles. , 2007, , . | | 4 |
| 100 | Monte Carlo method for simulating optical coherence tomography signal in homogeneous turbid media. Proceedings of SPIE, 2007, , . | 0.8 | 5 |
| 101 | <title>Influence of multiple light-scattering on TiO ₂ nanoparticles imbedded into stratum corneum on light transmittance in UV and visible wavelength regions</title>. , 2007, , . | | 0 |
| 102 | The effect of nanometer particles of titanium oxide on the protective properties of skin in the UV region. Journal of Optical Technology (A Translation of Opticheski Zhurnal), 2006, 73, 208. | 0.2 | 11 |
| 103 | Feasibility of glucose sensing by time- and spatial-resolved detection: Monte Carlo simulations of diffuse reflection in a three-layer skin model. , 2006, , . | | 0 |
| 104 | <title>Fiber-optic detection of ultrashort laser pulses diffusely reflected from intralipid skin phantom: effect of numerical aperture and scattering anisotropy</title>. , 2006, 6344, 424. | | 0 |
| 105 | Spectral features of composite oil-in-water emulsions containing silicon nanoparticles. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2006, 101, 590-596. | 0.2 | 13 |
| 106 | Advantages of NIR radiation use for optical determination of skin horny layer thickness with embedded TiO ₂ nanoparticles during tape stripping procedure. Laser Physics, 2006, 16, 751-757. | 0.6 | 4 |
| 107 | <title>Control of optical properties of human skin by embedding light scattering nanoparticles</title>. , 2005, , . | | 0 |
| 108 | Efficiency of TiO ₂ nanoparticles of different sizes as UV-B light skin-protective fraction in sunscreens. , 2005, , . | | 0 |

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| 109 | Optical sensing of titanium dioxide nanoparticles within horny layer of human skin and their protecting effect against solar UV radiation. , 2005, , . | | 13 |
| 110 | Effect of glucose concentration in a model light-scattering suspension on propagation of ultrashort laser pulses. Quantum Electronics, 2005, 35, 1075-1078. | 0.3 | 13 |
| 111 | Effect of size of TiO ₂ nanoparticles embedded into stratum corneum on ultraviolet-A and ultraviolet-B sun-blocking properties of the skin. Journal of Biomedical Optics, 2005, 10, 064037. | 1.4 | 86 |
| 112 | TiO ₂ nanoparticles as an effective UV-B radiation skin-protective compound in sunscreens. Journal Physics D: Applied Physics, 2005, 38, 2564-2570. | 1.3 | 174 |
| 113 | <title>Measurements of glucose content in scattering media with time-of-flight technique: comparison with Monte Carlo simulations</title>. , 2004, , . | | 15 |
| 114 | Manipulation of optical properties of human skin by light scattering nanoparticles of titanium dioxide. , 2004, , . | | 2 |
| 115 | <title>Noninvasive glucose sensing in scattering media using OCT, PAS, and TOF techniques</title>. , 2004, , . | | 11 |
| 116 | Effect of spectral width on short laser pulse propagation through upper layers of human skin: Monte Carlo simulations. , 2004, , . | | 0 |
| 117 | Title is missing!. Applied Biochemistry and Microbiology, 2003, 39, 454-458. | 0.3 | 5 |
| 118 | Acid Phosphatase Complex from the Freshwater Snail Viviparus viviparus L. under Standard Conditions and Intoxication by Cadmium Ions. Biochemistry (Moscow), 2003, 68, 1327-1334. | 0.7 | 7 |
| 119 | <title>Laser pulse propagation in turbid media: Monte Carlo simulation and comparison with experiment</title>. , 2003, 5068, 299. | | 12 |