

Sam Jin Choi

List of Publications by Year in descending order

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Version: 2024-02-01

106
papers

2,722
citations

201674

27
h-index

214800

47
g-index

106
all docs

106
docs citations

106
times ranked

3371
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | A novel wearable sensor device with conductive fabric and PVDF film for monitoring cardiorespiratory signals. <i>Sensors and Actuators A: Physical</i> , 2006, 128, 317-326. | 4.1 | 202 |
| 2 | Comparison of envelope extraction algorithms for cardiac sound signal segmentation. <i>Expert Systems With Applications</i> , 2008, 34, 1056-1069. | 7.6 | 187 |
| 3 | Cardiac sound murmurs classification with autoregressive spectral analysis and multi-support vector machine technique. <i>Computers in Biology and Medicine</i> , 2010, 40, 8-20. | 7.0 | 113 |
| 4 | A cardiac sound characteristic waveform method for in-home heart disorder monitoring with electric stethoscope. <i>Expert Systems With Applications</i> , 2006, 31, 286-298. | 7.6 | 112 |
| 5 | Paper-Based Surface-Enhanced Raman Spectroscopy for Diagnosing Prenatal Diseases in Women. <i>ACS Nano</i> , 2018, 12, 7100-7108. | 14.6 | 101 |
| 6 | Label-Free Surface-Enhanced Raman Spectroscopy Biosensor for On-Site Breast Cancer Detection Using Human Tears. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 7897-7904. | 8.0 | 83 |
| 7 | Facile Fabrication of a Silver Nanoparticle Immersed, Surface-Enhanced Raman Scattering Imposed Paper Platform through Successive Ionic Layer Absorption and Reaction for On-Site Bioassays. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 27910-27917. | 8.0 | 82 |
| 8 | Development of QRS detection algorithm designed for wearable cardiorespiratory system. <i>Computer Methods and Programs in Biomedicine</i> , 2009, 93, 20-31. | 4.7 | 71 |
| 9 | Evaluation of antibiotic effects on <i>Pseudomonas aeruginosa</i> biofilm using Raman spectroscopy and multivariate analysis. <i>Biomedical Optics Express</i> , 2014, 5, 3238. | 2.9 | 70 |
| 10 | Detection of valvular heart disorders using wavelet packet decomposition and support vector machine. <i>Expert Systems With Applications</i> , 2008, 35, 1679-1687. | 7.6 | 68 |
| 11 | A low-cost, monometallic, surface-enhanced Raman scattering-functionalized paper platform for spot-on bioassays. <i>Sensors and Actuators B: Chemical</i> , 2016, 222, 1112-1118. | 7.8 | 67 |
| 12 | Paper-based 3D microfluidic device for multiple bioassays. <i>Sensors and Actuators B: Chemical</i> , 2015, 219, 245-250. | 7.8 | 62 |
| 13 | A label-free cellulose SERS biosensor chip with improvement of nanoparticle-enhanced LSPR effects for early diagnosis of subarachnoid hemorrhage-induced complications. <i>Biosensors and Bioelectronics</i> , 2018, 111, 59-65. | 10.1 | 59 |
| 14 | Highly Reproducible Au-Decorated ZnO Nanorod Array on a Graphite Sensor for Classification of Human Aqueous Humors. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 5891-5899. | 8.0 | 52 |
| 15 | Low-Cost Label-Free Biosensing Bimetallic Cellulose Strip with SILAR-Synthesized Silver Core-Gold Shell Nanoparticle Structures. <i>Analytical Chemistry</i> , 2017, 89, 6448-6454. | 6.5 | 51 |
| 16 | Instrument-Free Synthesizable Fabrication of Label-Free Optical Biosensing Paper Strips for the Early Detection of Infectious Keratoconjunctivitis. <i>Analytical Chemistry</i> , 2016, 88, 5531-5537. | 6.5 | 48 |
| 17 | Label-Free Biochemical Analytic Method for the Early Detection of Adenoviral Conjunctivitis Using Human Tear Biofluids. <i>Analytical Chemistry</i> , 2014, 86, 11093-11099. | 6.5 | 47 |
| 18 | Development of ECG beat segmentation method by combining lowpass filter and irregular R-R interval checkup strategy. <i>Expert Systems With Applications</i> , 2010, 37, 5208-5218. | 7.6 | 46 |

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|----|--|-----|-----------|
| 19 | A simple and facile paper-based colorimetric assay for detection of free hydrogen sulfide in prostate cancer cells. <i>Sensors and Actuators B: Chemical</i> , 2018, 256, 828-834. | 7.8 | 41 |
| 20 | Structural response of human corneal and scleral tissues to collagen cross-linking treatment with riboflavin and ultraviolet A light. <i>Lasers in Medical Science</i> , 2013, 28, 1289-1296. | 2.1 | 40 |
| 21 | Rapid label-free identification of <i>Klebsiella pneumoniae</i> antibiotic resistant strains by the drop-coating deposition surface-enhanced Raman scattering method. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2017, 183, 53-59. | 3.9 | 36 |
| 22 | Selection of wavelet packet measures for insufficiency murmur identification. <i>Expert Systems With Applications</i> , 2011, 38, 4264-4271. | 7.6 | 35 |
| 23 | Poly(lactide-co-glycolide) nanofibrous scaffolds chemically coated with gold-nanoparticles as osteoinductive agents for osteogenesis. <i>Applied Surface Science</i> , 2018, 432, 300-307. | 6.1 | 35 |
| 24 | Medical Applications of Atomic Force Microscopy and Raman Spectroscopy. <i>Journal of Nanoscience and Nanotechnology</i> , 2014, 14, 71-97. | 0.9 | 33 |
| 25 | Effects of aging procedures on the molecular, biochemical, morphological, and mechanical properties of vacuum-formed retainers. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2015, 51, 356-366. | 3.1 | 33 |
| 26 | Neuroprotective effects of magnesium-sulfate on ischemic injury mediated by modulating the release of glutamate and reduced of hyperperfusion. <i>Brain Research</i> , 2011, 1371, 121-128. | 2.2 | 32 |
| 27 | A solvent-free microbial-activated air cathode battery paper platform made with pencil-traced graphite electrodes. <i>Scientific Reports</i> , 2016, 6, 28588. | 3.3 | 30 |
| 28 | A wearable cardiorespiratory sensor system for analyzing the sleep condition. <i>Expert Systems With Applications</i> , 2008, 35, 317-329. | 7.6 | 27 |
| 29 | Enhanced biocompatibility and wound healing properties of biodegradable polymer-modified allyl 2-cyanoacrylate tissue adhesive. <i>Materials Science and Engineering C</i> , 2015, 51, 43-50. | 7.3 | 27 |
| 30 | Effect of cross-linking with riboflavin and ultraviolet A on the chemical bonds and ultrastructure of human sclera. <i>Journal of Biomedical Optics</i> , 2011, 16, 125004. | 2.6 | 26 |
| 31 | Evaluation of aneurysm-associated wall shear stress related to morphological variations of circle of Willis using a microfluidic device. <i>Journal of Biomechanics</i> , 2015, 48, 348-353. | 2.1 | 26 |
| 32 | Surface ultrastructure and mechanical properties of three different white- TiO_2 -coated NiTi archwires. <i>Scanning</i> , 2015, 37, 414-421. | 1.5 | 25 |
| 33 | Fabrication of a SERS-encoded microfluidic paper-based analytical chip for the point-of-assay of wastewater. <i>International Journal of Precision Engineering and Manufacturing - Green Technology</i> , 2017, 4, 221-226. | 4.9 | 23 |
| 34 | A Fully Integrated Paper-Microfluidic Electrochemical Device for Simultaneous Analysis of Physiologic Blood Ions. <i>Sensors</i> , 2018, 18, 104. | 3.8 | 23 |
| 35 | Biocompatibility of a Novel Cyanoacrylate Based Tissue Adhesive: Cytotoxicity and Biochemical Property Evaluation. <i>PLoS ONE</i> , 2013, 8, e79761. | 2.5 | 22 |
| 36 | Effects of extracorporeal shockwave therapy on nanostructural and biomechanical responses in the collagenase-induced Achilles tendinitis animal model. <i>Lasers in Medical Science</i> , 2012, 27, 1195-1204. | 2.1 | 21 |

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|----|---|-----|-----------|
| 37 | AFM Study for Morphological Characteristics and Biomechanical Properties of Human Cataract Anterior Lens Capsules. <i>Scanning</i> , 2012, 34, 247-256. | 1.5 | 21 |
| 38 | Potential neuroprotective effects of acupuncture stimulation on diabetes mellitus in a global ischemic rat model. <i>Physiological Measurement</i> , 2010, 31, 633-647. | 2.1 | 20 |
| 39 | Investigation of aging effects in human hair using atomic force microscopy. <i>Skin Research and Technology</i> , 2011, 17, 63-68. | 1.6 | 20 |
| 40 | Biochemical investigations of human papillomavirus-infected cervical fluids. <i>Microscopy Research and Technique</i> , 2015, 78, 200-206. | 2.2 | 20 |
| 41 | Correlation between frictional force and surface roughness of orthodontic archwires. <i>Scanning</i> , 2015, 37, 399-405. | 1.5 | 20 |
| 42 | A stand-alone pressure-driven 3D microfluidic chemical sensing analytic device. <i>Sensors and Actuators B: Chemical</i> , 2016, 230, 380-387. | 7.8 | 20 |
| 43 | Internal-Specific Morphological Analysis of Sciatic Nerve Fibers in a Radiofrequency-Induced Animal Neuropathic Pain Model. <i>PLoS ONE</i> , 2013, 8, e73913. | 2.5 | 19 |
| 44 | Inflammatory responses and morphological changes of radiofrequency-induced rat sciatic nerve fibres. <i>European Journal of Pain</i> , 2014, 18, 192-203. | 2.8 | 19 |
| 45 | A facile, portable surface-enhanced Raman spectroscopy sensing platform for on-site chemometrics of toxic chemicals. <i>Sensors and Actuators B: Chemical</i> , 2021, 343, 130102. | 7.8 | 19 |
| 46 | Detecting Specific Health-Related Events Using an Integrated Sensor System for Vital Sign Monitoring. <i>Sensors</i> , 2009, 9, 6897-6912. | 3.8 | 18 |
| 47 | Changes in Ultrastructure and properties of bracket slots after Orthodontic treatment with bicuspid extraction. <i>Scanning</i> , 2011, 33, 25-32. | 1.5 | 18 |
| 48 | Ultrastructural investigation of intact orbital implant surfaces using atomic force microscopy. <i>Scanning</i> , 2011, 33, 211-221. | 1.5 | 18 |
| 49 | AFM Study for Morphological and Mechanical Properties of Human Scleral Surface. <i>Journal of Nanoscience and Nanotechnology</i> , 2011, 11, 6382-6388. | 0.9 | 17 |
| 50 | Structural and Biomechanical Effects of Photooxidative Collagen Cross-Linking with Photosensitizer Riboflavin and 370 nm UVA Light on Human Corneoscleral Tissues. <i>Microscopy and Microanalysis</i> , 2013, 19, 1334-1340. | 0.4 | 17 |
| 51 | Effects of fluoride treatment on phosphoric acid-etching in primary teeth: An AFM observation. <i>Micron</i> , 2010, 41, 498-506. | 2.2 | 16 |
| 52 | Effect of fluoride pretreatment on primary and permanent tooth surfaces by acid-etching. <i>Scanning</i> , 2010, 32, 375-382. | 1.5 | 16 |
| 53 | Label-free identification of antibiotic resistant isolates of living <i>Escherichia coli</i> : Pilot study. <i>Microscopy Research and Technique</i> , 2017, 80, 177-182. | 2.2 | 16 |
| 54 | The Role of Glutamate Release on Voltage-Dependent Anion Channels (VDAC)-Mediated Apoptosis in an Eleven Vessel Occlusion Model in Rats. <i>PLoS ONE</i> , 2010, 5, e15192. | 2.5 | 15 |

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|----|--|------|-----------|
| 55 | Neuroprotective Effects by Nimodipine Treatment in the Experimental Global Ischemic Rat Model : Real Time Estimation of Glutamate. Journal of Korean Neurosurgical Society, 2011, 49, 1. | 1.2 | 14 |
| 56 | A novel cardiac spectral segmentation based on a multi-Gaussian fitting method for regurgitation murmur identification. Signal Processing, 2014, 104, 339-345. | 3.7 | 13 |
| 57 | Changes in Collagen Fibril Pattern and Adhesion Force with Collagenase-Induced Injury in Rat Achilles Tendon Observed via AFM. Journal of Nanoscience and Nanotechnology, 2011, 11, 773-777. | 0.9 | 12 |
| 58 | Evaluation of inflammatory change and bone erosion using a murine type II collagen-induced arthritis model. Rheumatology International, 2011, 31, 595-603. | 3.0 | 12 |
| 59 | Molecular and chemical investigations and comparisons of biomaterials for ocular surface regeneration. Microscopy Research and Technique, 2014, 77, 183-188. | 2.2 | 12 |
| 60 | Controlling successive ionic layer absorption and reaction cycles to optimize silver nanoparticle-induced localized surface plasmon resonance effects on the paper strip. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2017, 174, 37-43. | 3.9 | 12 |
| 61 | Adiponectin-targeted SERS immunoassay biosensing platform for early detection of gestational diabetes mellitus. Biosensors and Bioelectronics, 2022, 213, 114488. | 10.1 | 12 |
| 62 | Potential effects of toothbrushing on human dentin wear following exposure to acidic soft drinks. Journal of Microscopy, 2012, 247, 176-185. | 1.8 | 11 |
| 63 | Short-term effect of cryotherapy on human scleral tissue by atomic force microscopy. Scanning, 2013, 35, 302-307. | 1.5 | 11 |
| 64 | An excitation wavelength-optimized, stable SERS biosensing nanoplatform for analyzing adenoviral and AstraZeneca COVID-19 vaccination efficacy status using tear samples of vaccinated individuals. Biosensors and Bioelectronics, 2022, 204, 114079. | 10.1 | 11 |
| 65 | Development of a joint space width measurement method based on radiographic hand images. Computers in Biology and Medicine, 2011, 41, 987-998. | 7.0 | 10 |
| 66 | Short-term nanostructural effects of high radiofrequency treatment on the skin tissues of rabbits. Lasers in Medical Science, 2012, 27, 923-933. | 2.1 | 10 |
| 67 | Real time measurement of myocardial oxygen dynamics during cardiac ischemia-reperfusion of rats. Analyst, The, 2012, 137, 5312. | 3.5 | 10 |
| 68 | Effects of self-ligating brackets on the surfaces of stainless steel wires following clinical use: AFM investigation. Journal of Microscopy, 2012, 246, 53-59. | 1.8 | 10 |
| 69 | Ultrastructural effect of self-ligating bracket materials on stainless steel and superelastic NiTi wire surfaces. Microscopy Research and Technique, 2012, 75, 1076-1083. | 2.2 | 10 |
| 70 | A recyclable CNC-milled microfluidic platform for colorimetric assays and label-free aged-related macular degeneration detection. Sensors and Actuators B: Chemical, 2019, 290, 484-492. | 7.8 | 10 |
| 71 | In vitro sliding-driven morphological changes in representative esthetic NiTi archwire surfaces. Microscopy Research and Technique, 2015, 78, 926-934. | 2.2 | 9 |
| 72 | Investigation of nanostructural changes following acute injury using atomic force microscopy in rabbit vocal folds. Microscopy Research and Technique, 2015, 78, 569-576. | 2.2 | 9 |

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|----|---|-----|-----------|
| 73 | Nanostructural investigation of frontalis sling biomaterial surfaces. <i>Scanning</i> , 2011, 33, 419-425. | 1.5 | 8 |
| 74 | Inflammatory Effect of Monopolar Radiofrequency Treatment on Collagen Fibrils in Rabbit Skins. <i>Journal of Biomedical Nanotechnology</i> , 2013, 9, 1403-1407. | 1.1 | 8 |
| 75 | Biochemical fingerprints of human papillomavirus infection and cervical dysplasia using cervical fluids: Spectral pattern investigation. <i>Microscopy Research and Technique</i> , 2016, 79, 966-972. | 2.2 | 8 |
| 76 | Effects of scleral collagen crosslinking with different carbohydrate on chemical bond and ultrastructure of rabbit sclera: Future treatment for myopia progression. <i>PLoS ONE</i> , 2019, 14, e0216425. | 2.5 | 8 |
| 77 | A rapid tag-free identification of <i>Escherichia coli</i> antibiotic-resistant isolates using Raman scattering. <i>Analytical Methods</i> , 2019, 11, 5381-5387. | 2.7 | 8 |
| 78 | Correlation between extracellular glutamate release and neuronal cell death in an eleven vessel occlusion model in rat. <i>Brain Research</i> , 2010, 1342, 160-166. | 2.2 | 7 |
| 79 | Label-free optical detection of age-related and diabetic oxidative damage in human aqueous humors. <i>Microscopy Research and Technique</i> , 2016, 79, 1050-1055. | 2.2 | 7 |
| 80 | Real-time ischemic condition monitoring in normoglycemic and hyperglycemic rats. <i>Physiological Measurement</i> , 2010, 31, 439-450. | 2.1 | 6 |
| 81 | Non-invasive screening of progressive joint defects in the Type II collagen-induced arthritis animal model using radiographic paw images. <i>Inflammation Research</i> , 2011, 60, 447-456. | 4.0 | 6 |
| 82 | Short-Term Response of Mitomycin C on the Human Rectus Muscle Following Strabismus Surgery: Histological, Ultrastructural, and Biomechanical Evaluation. <i>Microscopy and Microanalysis</i> , 2013, 19, 227-232. | 0.4 | 6 |
| 83 | Nanostructural and Nanomechanical Responses of Collagen Fibrils in the Collagenase-Induced Achilles Tendinitis Rat Model. <i>Journal of Nanoscience and Nanotechnology</i> , 2013, 13, 7279-7286. | 0.9 | 6 |
| 84 | Clinico-biochemical investigations of aging effects on normoglycemic and hyperglycemic murine retinal tissues. <i>Microscopy Research and Technique</i> , 2014, 77, 1023-1030. | 2.2 | 6 |
| 85 | Label-free breast cancer detection using fiber probe-based Raman spectrochemical biomarker-dominated profiles extracted from a mixture analysis algorithm. <i>Analytical Methods</i> , 2021, 13, 3249-3255. | 2.7 | 6 |
| 86 | Morphological investigation of various orthodontic lingual bracket slots using scanning electron microscopy and atomic force microscopy. <i>Microscopy Research and Technique</i> , 2016, 79, 1193-1199. | 2.2 | 5 |
| 87 | Wavelength-dependent label-free identification of isolated nontuberculous mycobacteria using surface-enhanced Raman spectroscopy. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2021, 248, 119186. | 3.9 | 5 |
| 88 | A novel cardiac spectral envelope extraction algorithm using a single-degree-of-freedom vibration model. <i>Biomedical Signal Processing and Control</i> , 2015, 18, 169-173. | 5.7 | 4 |
| 89 | Microfluidic-based non-enzymatic glycation enhances crosslinking of human scleral tissue compared to conventional soaking. <i>Scanning</i> , 2016, 38, 421-426. | 1.5 | 4 |
| 90 | Effect of Novel Bioactive Glass-Containing Dentin Adhesive on the Permeability of Demineralized Dentin. <i>Materials</i> , 2021, 14, 5423. | 2.9 | 4 |

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|-----|---|-----|-----------|
| 91 | Biological SERS-active sensor platform based on flexible silk fibroin film and gold nanoislands. Optics Express, 2022, 30, 7782. | 3.4 | 4 |
| 92 | Wavelet packet based features for insufficient murmur identification. , 2010, , . | | 3 |
| 93 | Biomechanical analysis of dynamic behavior in human postural control. , 2010, , . | | 3 |
| 94 | Postoperative effect of radiofrequency treatments on the rabbit dermal collagen fibrillary matrix. Microscopy Research and Technique, 2013, 76, 219-224. | 2.2 | 3 |
| 95 | Nanostructural Response of Mitomycin C Application on Human Scleral Tissues. Journal of Biomedical Nanotechnology, 2013, 9, 1393-1397. | 1.1 | 3 |
| 96 | Scanning Electron Microscopy Study of the Effect of the Brushing Time on the Human Tooth Dentin After Exposure to Acidic Softdrinks. Journal of Nanoscience and Nanotechnology, 2012, 12, 5199-5204. | 0.9 | 2 |
| 97 | Nanostructural effect of acid-etching and fluoride application on human primary and permanent tooth enamels. Materials Science and Engineering C, 2012, 32, 1127-1132. | 7.3 | 2 |
| 98 | Paper-based printed circuit boards. , 2015, , . | | 2 |
| 99 | Surface analysis of metal clips of ceramic self-ligating brackets. Korean Journal of Orthodontics, 2019, 49, 12. | 2.3 | 2 |
| 100 | Analysis of cerebral blood flow by pneumatic-valves-controlled microfluidic device: risk assessment of infarction correlated with morphometric variation of cerebral vascular system. Microfluidics and Nanofluidics, 2014, 17, 843-853. | 2.2 | 1 |
| 101 | Label-free monitoring of inflammatory tissue conditions using a carrageenan-induced acute inflammation rat model. Microscopy Research and Technique, 2018, 81, 544-550. | 2.2 | 1 |
| 102 | Effect of Dentin Desensitizer Containing Novel Bioactive Glass on the Permeability of Dentin. Materials, 2022, 15, 4041. | 2.9 | 1 |
| 103 | Effect of extracorporeal shockwave therapy on nanostructural and property responses of the Achilles tendinitis rat model. , 2011, , . | | 0 |
| 104 | Effects of Mitomycin C on Scleral Collagen Fibrils According to Atomic Force Microscopy. Journal of Korean Ophthalmological Society, 2011, 52, 671. | 0.2 | 0 |
| 105 | A low-cost ion detecting device with paper-based disposal sensor. , 2015, , . | | 0 |
| 106 | GS1-26 INITIAL FORCE DELIVERY CHARACTERISTICS OF LIGATION ON NANOSTUCTURE AND MECHANICAL PROPERTIES OF NITI SHAPE MEMORY ALLOYS(GS1: Cell and Tissue Biomechanics). The Proceedings of the Asian Pacific Conference on Biomechanics Emerging Science and Technology in Biomechanics, 2015, 2015.8, 137. | 0.0 | 0 |