# Sung-Gyu Park

List of Publications by Year
in descending order

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Version: 2024-02-01

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|---|---|---|---|
| 90 papers | 3,720 citations | 172386 29 h-index | 138417 58 g-index |
| 92 all docs | 92 docs citations | 92 times ranked | 5511 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Charge-transfer-based Gas Sensing Using Atomic-layer MoS2. Scientific Reports, 2015, 5, 8052. | 1.6 | 489 |
| 2 | Chemical Sensing of 2D Graphene/MoS<sub>2</sub> Heterostructure device. ACS Applied Materials & Interfaces, 2015, 7, 16775-16780. | 4.0 | 375 |
| 3 | Graphene-based gas sensor: metal decoration effect and application to a flexible device. Journal of Materials Chemistry C, 2014, 2, 5280-5285. | 2.7 | 198 |
| 4 | Ultrasmooth, extremely deformable and shape recoverable Ag nanowire embedded transparent electrode. Scientific Reports, 2014, 4, 4788. | 1.6 | 194 |
| 5 | SERS imaging-based aptasensor for ultrasensitive and reproducible detection of influenza virus A. Biosensors and Bioelectronics, 2020, 167, 112496. | 5.3 | 117 |
| 6 | Sensitive Detection of SARS-CoV-2 Using a SERS-Based Aptasensor. ACS Sensors, 2021, 6, 2378-2385. | 4.0 | 109 |
| 7 | Nanostructured plasmonic substrates for use as SERS sensors. Nano Convergence, 2016, 3, 18. | 6.3 | 99 |
| 8 | Thermoresponsive Hydrogel Photonic Crystals by Threeâ€Dimensional Holographic Lithography. Advanced Materials, 2008, 20, 3061-3065. | 11.1 | 98 |
| 9 | Surface Energyâ€Controlled SERS Substrates for Molecular Concentration at Plasmonic Nanogaps. Advanced Functional Materials, 2017, 27, 1703376. | 7.8 | 84 |
| 10 | A Wearable Surface-Enhanced Raman Scattering Sensor for Label-Free Molecular Detection. ACS Applied Materials & Interfaces, 2021, 13, 3024-3032. | 4.0 | 70 |
| 11 | 3D Hybrid Plasmonic Nanomaterials for Highly Efficient Optical Absorbers and Sensors. Advanced Materials, 2015, 27, 4290-4295. | 11.1 | 69 |
| 12 | M13 Bacteriophage/Silver Nanowire Surface-Enhanced Raman Scattering Sensor for Sensitive and Selective Pesticide Detection. ACS Applied Materials & Interfaces, 2018, 10, 10388-10397. | 4.0 | 69 |
| 13 | A facile low-cost paper-based SERS substrate for label-free molecular detection. Sensors and Actuators B: Chemical, 2019, 291, 369-377. | 4.0 | 68 |
| 14 | Sensitive and Reproducible Immunoassay of Multiple Mycotoxins Using Surfaceâ€Enhanced Raman Scattering Mapping on 3D Plasmonic Nanopillar Arrays. Small, 2018, 14, e1801623. | 5.2 | 67 |
| 15 | Holographic fabrication of three-dimensional nanostructures for microfluidic passive mixing. Lab on A Chip, 2009, 9, 3144. | 3.1 | 66 |
| 16 | Bioinspired Holographically Featured Superhydrophobic and Superstícky Nanostructured Materials. Langmuir, 2010, 26, 1468-1472. | 1.6 | 58 |
| 17 | Cu<sub>2</sub>O Inverse Woodpile Photonic Crystals by Prism Holographic Lithography and Electrodeposition. Advanced Materials, 2011, 23, 2749-2752. | 11.1 | 55 |
| 18 | Holographic fabrication of photonic nanostructures for optofluidic integration. Lab on A Chip, 2008, 8, 388. | 3.1 | 54 |

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|---|---|---|---|
| 19 | Culture-Free Detection of Bacterial Pathogens on Plasmonic Nanopillar Arrays Using Rapid Raman Mapping. ACS Applied Materials & Interfaces, 2018, 10, 6831-6840. | 4.0 | 54 |
| 20 | Shape Control of Ag Nanostructures for Practical SERS Substrates. ACS Applied Materials & Interfaces, 2013, 5, 243-248. | 4.0 | 50 |
| 21 | Standingâ€Waveâ€Assisted Creation of Nanopillar Arrays with Vertically Integrated Nanogaps for SERSâ€Active Substrates. Advanced Functional Materials, 2015, 25, 4681-4688. | 7.8 | 49 |
| 22 | Selfâ€Assembly of Nanoparticleâ€Spiked Pillar Arrays for Plasmonic Biosensing. Advanced Functional Materials, 2019, 29, 1904257. | 7.8 | 47 |
| 23 | 3D Hierarchical Architectures Prepared by Single Exposure Through a Highly Durable Colloidal Phase Mask. Advanced Materials, 2014, 26, 1422-1426. | 11.1 | 45 |
| 24 | PCR-coupled Paper-based Surface-enhanced Raman Scattering (SERS) Sensor for Rapid and Sensitive Detection of Respiratory Bacterial DNA. Sensors and Actuators B: Chemical, 2021, 326, 128802. | 4.0 | 43 |
| 25 | SERSâ€Activeâ€Charged Microgels for Sizeâ€and Chargeâ€Selective Molecular Analysis of Complex Biological Samples. Small, 2018, 14, e1802520. | 5.2 | 40 |
| 26 | Anisotropic wetting and superhydrophobicity on holographically featured 3D nanostructured surfaces. Soft Matter, 2012, 8, 4567. | 1.2 | 39 |
| 27 | Perfectly Hydrophobic Surfaces with Patterned Nanoneedles of Controllable Features. Langmuir, 2010, 26, 5295-5299. | 1.6 | 36 |
| 28 | Metal Nanoparticle-Loaded Microgels with Selective Permeability for Direct Detection of Small Molecules in Biological Fluids. Chemistry of Materials, 2016, 28, 1559-1565. | 3.2 | 34 |
| 29 | Quantitative Structure and Property Analysis of Nanoporous Low Dielectric Constant SiCOH Thin Films. Journal of Physical Chemistry C, 2007, 111, 10848-10854. | 1.5 | 32 |
| 30 | Microfluidic Designing Microgels Containing Highly Concentrated Gold Nanoparticles for SERS Analysis of Complex Fluids. Small, 2019, 15, e1905076. | 5.2 | 32 |
| 31 | SERS-PCR assays of SARS-CoV-2 target genes using Au nanoparticles-internalized Au nanodimple substrates. Biosensors and Bioelectronics, 2022, 197, 113736. | 5.3 | 32 |
| 32 | Reproducible and Sensitive Plasmonic Sensing Platforms Based on Auâ€Nanoparticleâ€Internalized Nanodimpled Substrates. Advanced Functional Materials, 2021, 31, 2105703. | 7.8 | 31 |
| 33 | In situ electrochemical surface modification of Au electrodes for simultaneous label-free SERS detection of ascorbic acid, dopamine and uric acid. Sensors and Actuators B: Chemical, 2022, 353, 131196. | 4.0 | 30 |
| 34 | Surface-enhanced Raman scattering-based immunoassay for severe acute respiratory syndrome coronavirus 2. Biosensors and Bioelectronics, 2022, 202, 114008. | 5.3 | 30 |
| 35 | Plasmonic contact lens materials for glucose sensing in human tears. Sensors and Actuators B: Chemical, 2021, 344, 130297. | 4.0 | 28 |
| 36 | Optofluidics technology based on colloids and their assemblies. Microfluidics and Nanofluidics, 2008, 4, 129-144. | 1.0 | 27 |

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|---|---|---|---|
| 37 | Highly sensitive and on-site NO<sub>2</sub> SERS sensors operated under ambient conditions. Analyst, The, 2018, 143, 3006-3010. | 1.7 | 27 |
| 38 | DNA electrophoresis in a nanofence array. Lab on A Chip, 2012, 12, 1463. | 3.1 | 26 |
| 39 | Uniform Microgels Containing Agglomerates of Silver Nanocubes for Molecular Sizeâ€Selectivity and High SERS Activity. Small, 2017, 13, 1604048. | 5.2 | 25 |
| 40 | Bioinspired plasmonic nanoflower-decorated microneedle for label-free intradermal sensing. Applied Surface Science, 2021, 551, 149411. | 3.1 | 24 |
| 41 | 3D multilayered plasmonic nanostructures with high areal density for SERS. RSC Advances, 2017, 7, 17898-17905. | 1.7 | 22 |
| 42 | Hydrophobic hBN-coated surface-enhanced Raman scattering sponge sensor for simultaneous separation and detection of organic pollutants. Journal of Materials Chemistry C, 2019, 7, 13059-13069. | 2.7 | 22 |
| 43 | Optically tunable arrayed structures for highly sensitive plasmonic detection via simplified holographic lithography. Journal of Materials Chemistry, 2012, 22, 4603. | 6.7 | 21 |
| 44 | Raman Scattering Mapping: Sensitive and Reproducible Immunoassay of Multiple Mycotoxins Using Surfaceâ€Enhanced Raman Scattering Mapping on 3D Plasmonic Nanopillar Arrays (Small 39/2018). Small, 2018, 14, 1870179. | 5.2 | 21 |
| 45 | Fabrication of highly uniform three-dimensional SERS substrates by control of wettability. Journal of Materials Chemistry C, 2013, 1, 426-431. | 2.7 | 20 |
| 46 | Fabrication of 3D ZnO hollow shell structures by prism holographic lithography and atomic layer deposition. Journal of Materials Chemistry C, 2014, 2, 1957-1961. | 2.7 | 20 |
| 47 | Analyte-concentrating 3D hybrid plasmonic nanostructures for use in highly sensitive chemical sensors. RSC Advances, 2016, 6, 92120-92126. | 1.7 | 19 |
| 48 | Fabrication of microparticles with controllable internal woodpile structures for highly efficient sensing applications. RSC Advances, 2012, 2, 2334. | 1.7 | 18 |
| 49 | Development of a robust, self-cleaning, amphiphobic, and electrically conductive coating on a flexible polymer substrate. Materials and Design, 2019, 182, 108023. | 3.3 | 18 |
| 50 | Early and direct detection of bacterial signaling molecules through one-pot Au electrodeposition onto paper-based 3D SERS substrates. Sensors and Actuators B: Chemical, 2022, 358, 131504. | 4.0 | 18 |
| 51 | Effect of in situ hydrogen plasma treatment on zinc oxide grown using low temperature atomic layer deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2013, 31, 01A124. | 0.9 | 17 |
| 52 | Holographic Fabrication of 3D Nanostructures. Advanced Materials Interfaces, 2018, 5, 1800330. | 1.9 | 17 |
| 53 | Compact Integration of TiO2 Nanoparticles into the Cross-Points of 3D Vertically Stacked Ag Nanowires for Plasmon-Enhanced Photocatalysis. Nanomaterials, 2019, 9, 468. | 1.9 | 17 |
| 54 | Organometallic hotspot engineering for ultrasensitive EC-SERS detection of pathogenic bacteria-derived DNAs. Biosensors and Bioelectronics, 2022, 210, 114325. | 5.3 | 17 |

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|---|---|---|---|
| 55 | Stackedâ€Disk Nanotower Arrays for Use as Omniphobic Surfaceâ€Enhanced Raman Scattering Substrates. Advanced Optical Materials, 2016, 4, 1893-1900. | 3.6 | 16 |
| 56 | Fabrication of Au-Decorated 3D ZnO Nanostructures as Recyclable SERS Substrates. IEEE Sensors Journal, 2016, 16, 3382-3386. | 2.4 | 16 |
| 57 | A cyclodextrin-decorated plasmonic gold nanosatellite substrate for selective detection of bipyridylium pesticides. Analyst, The, 2021, 146, 305-314. | 1.7 | 16 |
| 58 | Structural characterization of wavelength-dependent Raman scattering and laser-induced crystallization of silicon thin films. Thin Solid Films, 2013, 542, 388-392. | 0.8 | 15 |
| 59 | Plasmonic Microgels for Raman-Based Molecular Detection Created by Simultaneous Photoreduction and Photocross-linking. ACS Applied Materials & Interfaces, 2020, 12, 48188-48197. | 4.0 | 14 |
| 60 | SERS-based serodiagnosis of acute febrile diseases using plasmonic nanopopcorn microarray platforms. Biosensors and Bioelectronics, 2021, 192, 113525. | 5.3 | 14 |
| 61 | Dual length-scale nanotip arrays with controllable morphological features for highly sensitive SERS applications. Journal of Materials Chemistry, 2012, 22, 23650. | 6.7 | 13 |
| 62 | Fabrication of Three-Dimensional Nanostructured Titania Materials by Prism Holographic Lithography and the Solâ€“Gel Reaction. Langmuir, 2013, 29, 9620-9625. | 1.6 | 13 |
| 63 | Highly efficient hybrid thin-film solar cells using a solution-processed hole-blocking layer. Physical Chemistry Chemical Physics, 2013, 15, 1788-1792. | 1.3 | 13 |
| 64 | Encapsulation of 3D plasmonic nanostructures with ultrathin hydrogel skin for rapid and direct detection of toxic small molecules in complex fluids. Nanoscale, 2020, 12, 12942-12949. | 2.8 | 13 |
| 65 | SERS substrates based on self-organized dimple nanostructures on polyethylene naphthalate films produced via oxygen ion beam sputtering. Applied Surface Science, 2022, 572, 151452. | 3.1 | 13 |
| 66 | Doping-free silicon thin film solar cells using a vanadium pentoxide window layer and a LiF/Al back electrode. Applied Physics Letters, 2013, 103, . | 1.5 | 12 |
| 67 | 3D-assembled Ag nanowires for use in plasmon-enhanced spectroscopic sensors. Applied Spectroscopy Reviews, 2019, 54, 325-347. | 3.4 | 12 |
| 68 | Plasmonic hotspot engineering of Ag-coated polymer substrates with high reproducibility and photothermal stability. Sensors and Actuators B: Chemical, 2022, 354, 131110. | 4.0 | 12 |
| 69 | Efficient Hydrogenated Amorphous Silicon Thin-Film Solar Cells Using Zinc Oxide Deposited by Atomic Layer Deposition as a Protective Interfacial Layer. Journal of Physical Chemistry C, 2012, 116, 23231-23235. | 1.5 | 11 |
| 70 | Rapid and sensitive multiplex molecular diagnosis of respiratory pathogens using plasmonic isothermal RPA array chip. Biosensors and Bioelectronics, 2021, 182, 113167. | 5.3 | 11 |
| 71 | Multicolor patterning using holographic woodpile photonic crystals at visible wavelengths. Nanoscale, 2013, 5, 4110. | 2.8 | 10 |
| 72 | Tethered molecular redox capacitors for nanoconfinement-assisted electrochemical signal amplification. Nanoscale, 2020, 12, 3668-3676. | 2.8 | 10 |

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|---|---|---|---|
| 73 | Highly Sensitive and Selective Nanogap-Enhanced SERS Sensing Platform. Nanomaterials, 2019, 9, 619. | 1.9 | 9 |
| 74 | Simple Fabrication of Transparent, Colorless, and Self-Disinfecting Polyethylene Terephthalate Film via Cold Plasma Treatment. Nanomaterials, 2020, 10, 949. | 1.9 | 9 |
| 75 | Nanoconfined 3D redox capacitor-based electrochemical sensor for ultrasensitive monitoring of metabolites in bacterial communication. Sensors and Actuators B: Chemical, 2021, 345, 130427. | 4.0 | 9 |
| 76 | In Situ Electrodeposition of Gold Nanostructures in 3D Ultraâ€Thin Hydrogel Skins for Direct Molecular Detection in Complex Mixtures with High Sensitivity. Laser and Photonics Reviews, 2021, 15, 2100316. | 4.4 | 9 |
| 77 | Fabrication and near-field visualization of a wafer-scale dense plasmonic nanostructured array. RSC Advances, 2018, 8, 6444-6451. | 1.7 | 8 |
| 78 | Direct visualization of a surface-enhanced Raman spectroscopy nano-gap via electrostatic force microscopy: Dependence on charge transfer from the underlying surface nano-gap distance. Applied Surface Science, 2019, 479, 874-878. | 3.1 | 8 |
| 79 | Hydrogel-Assisted 3D Volumetric Hotspot for Sensitive Detection by Surface-Enhanced Raman Spectroscopy. International Journal of Molecular Sciences, 2022, 23, 1004. | 1.8 | 8 |
| 80 | Ratchet nanofiltration of DNA. Lab on A Chip, 2013, 13, 3741. | 3.1 | 7 |
| 81 | 3D nanoporous plasmonic chips for extremely sensitive NO<sub>2</sub> detection. Analyst, The, 2019, 144, 7162-7167. | 1.7 | 7 |
| 82 | Characterization of microcrystalline silicon thin film solar cells prepared by high working pressure plasma-enhanced chemical vapor deposition. Journal of Electroceramics, 2014, 33, 149-154. | 0.8 | 5 |
| 83 | Smallâ€Volume Plasmonic Microwell Array with 3D Hierarchical Nanomaterials for Plasmonâ€Enhanced Fluorescence Immunoassay. Advanced NanoBiomed Research, 2021, 1, 2000015. | 1.7 | 5 |
| 84 | Quasi-3D Plasmonic Nanowell Array for Molecular Enrichment and SERS-Based Detection. Nanomaterials, 2020, 10, 939. | 1.9 | 3 |
| 85 | Dual synergistic modulation of photo-induced electron transfer processes between molecules and gold nanopillars for ultrasensitive plasmon-enhanced Raman scattering. Journal of Materials Chemistry C, 2021, 9, 8842-8848. | 2.7 | 2 |
| 86 | Electrochemical Synthesis of 3D Plasmonicâ€Molecule Nanocomposite Materials for In Situ Labelâ€Free Molecular Detections. Advanced Materials Interfaces, 2021, 8, 2101201. | 1.9 | 2 |
| 87 | Reproducible and Sensitive Plasmonic Sensing Platforms Based on Auâ€Nanoparticleâ€Internalized Nanodimpled Substrates (Adv. Funct. Mater. 49/2021). Advanced Functional Materials, 2021, 31, 2170366. | 7.8 | 2 |
| 88 | Three-Dimensional Hot-Volume Plasmonic Gold Nanoreactor Array for Ultrasensitive Immunoassays. ACS Applied Nano Materials, 2022, 5, 4269-4280. | 2.4 | 2 |
| 89 | Hierarchical Structures: 3D Hierarchical Architectures Prepared by Single Exposure Through a Highly Durable Colloidal Phase Mask (Adv. Mater. 9/2014). Advanced Materials, 2014, 26, 1421-1421. | 11.1 | 1 |
| 90 | Electrochemical Synthesis of 3D Plasmonicâ€Molecule Nanocomposite Materials for In Situ Labelâ€Free Molecular Detections (Adv. Mater. Interfaces 21/2021). Advanced Materials Interfaces, 2021, 8, . | 1.9 | 0 |