# Aravind Vijayaraghavan

## List of Publications by Citations



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|---|---|---|---|
| 102 papers | 4,103 citations | 37 h-index | 62 g-index |
| 109 ext. papers | 4,645 ext. citations | 7.8 avg, IF | 5.42 L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 102 | Bi- and trilayer graphene solutions. *Nature Nanotechnology*, **2011**, 6, 439-45 | 28.7 | 304 |
| 101 | Graphene Sensors. *IEEE Sensors Journal*, **2011**, 11, 3161-3170 | 4 | 290 |
| 100 | Ultra-large-scale directed assembly of single-walled carbon nanotube devices. *Nano Letters*, **2007**, 7, 1556-60 | 11.5 | 269 |
| 99 | Synthesis of Atomically Thin WO3 Sheets from Hydrated Tungsten Trioxide. *Chemistry of Materials*, **2010**, 22, 5660-5666 | 9.6 | 187 |
| 98 | Graphene oxide selectively targets cancer stem cells, across multiple tumor types: implications for non-toxic cancer treatment, via "differentiation-based nano-therapy". *Oncotarget*, **2015**, 6, 3553-62 | 3.3 | 150 |
| 97 | Synthesis and Characterization of Thickness-Aligned Carbon Nanotube−Polymer Composite Films. *Chemistry of Materials*, **2005**, 17, 974-983 | 9.6 | 140 |
| 96 | High flux and fouling resistant flat sheet polyethersulfone membranes incorporated with graphene oxide for ultrafiltration applications. *Chemical Engineering Journal*, **2018**, 334, 789-799 | 14.7 | 134 |
| 95 | Polarized plasmonic enhancement by Au nanostructures probed through Raman scattering of suspended graphene. *Nano Letters*, **2013**, 13, 301-8 | 11.5 | 123 |
| 94 | Flux-enhanced PVDF mixed matrix membranes incorporating APTS-functionalized graphene oxide for membrane distillation. *Journal of Membrane Science*, **2018**, 554, 309-323 | 9.6 | 97 |
| 93 | Metal--semiconductor transition in single-walled carbon nanotubes induced by low-energy electron irradiation. *Nano Letters*, **2005**, 5, 1575-9 | 11.5 | 81 |
| 92 | Multiplexed biomimetic lipid membranes on graphene by dip-pen nanolithography. *Nature Communications*, **2013**, 4, 2591 | 17.4 | 80 |
| 91 | Self assembled monolayers (SAMs) on metallic surfaces (gold and graphene) for electronic applications. *Journal of Materials Chemistry C*, **2013**, 1, 376-393 | 7.1 | 72 |
| 90 | Evaluating arbitrary strain configurations and doping in graphene with Raman spectroscopy. *2D Materials*, **2018**, 5, 015016 | 5.9 | 71 |
| 89 | Phonon-assisted electroluminescence from metallic carbon nanotubes and graphene. *Nano Letters*, **2010**, 10, 1589-94 | 11.5 | 71 |
| 88 | Dielectrophoretic assembly of high-density arrays of individual graphene devices for rapid screening. *ACS Nano*, **2009**, 3, 1729-34 | 16.7 | 69 |
| 87 | Directed self-assembly of block copolymers for use in bit patterned media fabrication. *Journal Physics D: Applied Physics*, **2013**, 46, 503001 | 3 | 63 |
| 86 | Magnetic properties of Co nanocolumns fabricated by oblique-angle deposition. *Journal of Applied Physics*, **2003**, 93, 4194-4200 | 2.5 | 63 |

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| 85 | Toward single-chirality carbon nanotube device arrays. *ACS Nano*, **2010**, 4, 2748-54 | 16.7 | 62 |
| 84 | PVDF membranes containing reduced graphene oxide: Effect of degree of reduction on membrane distillation performance. *Desalination*, **2019**, 452, 196-207 | 10.3 | 60 |
| 83 | Charge-injection-induced dynamic screening and origin of hysteresis in field-modulated transport in single-wall carbon nanotubes. *Applied Physics Letters*, **2006**, 89, 162108 | 3.4 | 59 |
| 82 | High purity graphenes prepared by a chemical intercalation method. *Nanoscale*, **2010**, 2, 2139-43 | 7.7 | 56 |
| 81 | Ordered Ni nanowire tip arrays sticking out of the anodic aluminum oxide template. *Journal of Applied Physics*, **2005**, 97, 064303 | 2.5 | 56 |
| 80 | Biomimetic Phospholipid Membrane Organization on Graphene and Graphene Oxide Surfaces: A Molecular Dynamics Simulation Study. *ACS Nano*, **2017**, 11, 1613-1625 | 16.7 | 54 |
| 79 | Graphene Oxide promotes embryonic stem cell differentiation to haematopoietic lineage. *Scientific Reports*, **2016**, 6, 25917 | 4.9 | 52 |
| 78 | Anisotropic organization and microscopic manipulation of self-assembling synthetic porphyrin microrods that mimic chlorosomes: bacterial light-harvesting systems. *Journal of the American Chemical Society*, **2012**, 134, 944-54 | 16.4 | 50 |
| 77 | Hydrogen sensing with diameter- and chirality-sorted carbon nanotubes. *ACS Nano*, **2011**, 5, 1670-6 | 16.7 | 49 |
| 76 | Graphene oxide containing self-assembling peptide hybrid hydrogels as a potential 3D injectable cell delivery platform for intervertebral disc repair applications. *Acta Biomaterialia*, **2019**, 92, 92-103 | 10.8 | 48 |
| 75 | Quantitative analysis of hysteresis in carbon nanotube field-effect devices. *Applied Physics Letters*, **2006**, 89, 132118 | 3.4 | 48 |
| 74 | Plasmon-enhanced Raman scattering by carbon nanotubes optically coupled with near-field cavities. *Nano Letters*, **2014**, 14, 1762-8 | 11.5 | 47 |
| 73 | Properties of a Thermotropic Nematic Liquid Crystal Doped with Graphene Oxide. *Advanced Optical Materials*, **2016**, 4, 1541-1548 | 8.1 | 45 |
| 72 | Designing Peptide/Graphene Hybrid Hydrogels through Fine-Tuning of Molecular Interactions. *Biomacromolecules*, **2018**, 19, 2731-2741 | 6.9 | 44 |
| 71 | Graphene oxide films for field effect surface passivation of silicon for solar cells. *Solar Energy Materials and Solar Cells*, **2018**, 187, 189-193 | 6.4 | 44 |
| 70 | Impeded physical aging in PIM-1 membranes containing graphene-like fillers. *Journal of Membrane Science*, **2018**, 563, 513-520 | 9.6 | 44 |
| 69 | Enhanced organophilic separations with mixed matrix membranes of polymers of intrinsic microporosity and graphene-like fillers. *Journal of Membrane Science*, **2017**, 526, 437-449 | 9.6 | 41 |
| 68 | Polyethersulfone membranes: From ultrafiltration to nanofiltration via the incorporation of APTS functionalized-graphene oxide. *Separation and Purification Technology*, **2020**, 230, 115836 | 8.3 | 41 |

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| 67 | Catalytic subsurface etching of nanoscale channels in graphite. *Nature Communications*, **2013**, 4, 1379 | 17.4 | 40 |
| 66 | Influence of structural and dielectric anisotropy on the dielectrophoresis of single-walled carbon nanotubes. *Nano Letters*, **2007**, 7, 1960-6 | 11.5 | 39 |
| 65 | Functionalization of carbon nanotubes using phenosafranin. *Journal of Chemical Physics*, **2004**, 120, 4886-9 | 3.9 | 37 |
| 64 | Dielectric spectroscopy of isotropic liquids and liquid crystal phases with dispersed graphene oxide. *Scientific Reports*, **2016**, 6, 31885 | 4.9 | 35 |
| 63 | Optical-phonon resonances with saddle-point excitons in twisted-bilayer graphene. *Nano Letters*, **2014**, 14, 5687-92 | 11.5 | 34 |
| 62 | Capacitive pressure sensing with suspended graphene-polymer heterostructure membranes. *Nanoscale*, **2017**, 9, 17439-17449 | 7.7 | 34 |
| 61 | Ionic liquid-derived blood-compatible composite membranes for kidney dialysis. *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, **2006**, 79, 298-304 | 3.5 | 32 |
| 60 | A scalable, CMOS-compatible assembly of ambipolar semiconducting single-walled carbon nanotube devices. *Advanced Materials*, **2011**, 23, 1734-8 | 24 | 31 |
| 59 | Imaging electronic structure of carbon nanotubes by voltage-contrast scanning electron microscopy. *Nano Research*, **2008**, 1, 321-332 | 10 | 28 |
| 58 | Study on the formation of thin film nanocomposite (TFN) membranes of polymers of intrinsic microporosity and graphene-like fillers: Effect of lateral flake size and chemical functionalization. *Journal of Membrane Science*, **2018**, 565, 390-401 | 9.6 | 28 |
| 57 | Nanoscale infrared identification and mapping of chemical functional groups on graphene. *Carbon*, **2018**, 139, 317-324 | 10.4 | 28 |
| 56 | Protein interactions and conformations on graphene-based materials mapped using a quartz-crystal microbalance with dissipation monitoring (QCM-D). *Carbon*, **2020**, 165, 317-327 | 10.4 | 27 |
| 55 | Mechanism of metal-semiconductor transition in electric properties of single-walled carbon nanotubes induced by low-energy electron irradiation. *Journal of Applied Physics*, **2007**, 101, 034317 | 2.5 | 26 |
| 54 | Embedded carbon-nanotube-stiffened polymer surfaces. *Small*, **2005**, 1, 317-20 | 11 | 23 |
| 53 | Reversible metal-insulator transitions in metallic single-walled carbon nanotubes. *Nano Letters*, **2008**, 8, 2767-72 | 11.5 | 22 |
| 52 | Adsorption and binding dynamics of graphene-supported phospholipid membranes using the QCM-D technique. *Nanoscale*, **2018**, 10, 2555-2567 | 7.7 | 19 |
| 51 | Imaging defects and junctions in single-walled carbon nanotubes by voltage-contrast scanning electron microscopy. *Carbon*, **2010**, 48, 494-500 | 10.4 | 19 |
| 50 | In vitro transcription and protein translation from carbon nanotube-DNA assemblies. *Small*, **2006**, 2, 718-22 | 11 | 19 |

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| 49 | Graphene and water-based elastomers thin-film composites by dip-moulding. *Carbon*, **2016**, 106, 228-232 | 10.4 | 19 |
| 48 | Self-limiting multiplexed assembly of lipid membranes on large-area graphene sensor arrays. *Nanoscale*, **2016**, 8, 15147-51 | 7.7 | 19 |
| 47 | Confinement effects on lyotropic nematic liquid crystal phases of graphene oxide dispersions. *2D Materials*, **2017**, 4, 041004 | 5.9 | 18 |
| 46 | Room-temperature resonant tunneling of electrons in carbon nanotube junction quantum wells. *Applied Physics Letters*, **2005**, 86, 183101 | 3.4 | 18 |
| 45 | Ultra-thin graphene-polymer heterostructure membranes. *Nanoscale*, **2016**, 8, 17928-17939 | 7.7 | 18 |
| 44 | Gas separation performance of MMMs containing (PIM-1)-functionalized GO derivatives. *Journal of Membrane Science*, **2021**, 623, 118902 | 9.6 | 18 |
| 43 | Unique structure/properties of chemical vapor deposited parylene E. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2002**, 20, 1445-1449 | 2.9 | 17 |
| 42 | Charge transfer at junctions of a single layer of graphene and a metallic single walled carbon nanotube. *Small*, **2013**, 9, 1954-63 | 11 | 16 |
| 41 | Effect of ambient pressure on resistance and resistance fluctuations in single-wall carbon nanotube devices. *Journal of Applied Physics*, **2006**, 100, 024315 | 2.5 | 15 |
| 40 | A Point-of-Care Immunosensor Based on a Quartz Crystal Microbalance with Graphene Biointerface for Antibody Assay. *ACS Sensors*, **2020**, 5, 3520-3532 | 9.2 | 15 |
| 39 | Touch-mode capacitive pressure sensor with graphene-polymer heterostructure membrane. *2D Materials*, **2018**, 5, 015025 | 5.9 | 14 |
| 38 | Ultrafast quantitative nanomechanical mapping of suspended graphene. *Physica Status Solidi (B): Basic Research*, **2013**, 250, 2672-2677 | 1.3 | 14 |
| 37 | Improving the glial differentiation of human Schwann-like adipose-derived stem cells with graphene oxide substrates. *Interface Focus*, **2018**, 8, 20180002 | 3.9 | 13 |
| 36 | Stokes and anti-Stokes Raman spectra of the high-energy C□ stretching modes in graphene and diamond. *Physica Status Solidi (B): Basic Research*, **2015**, 252, 2380-2384 | 1.3 | 13 |
| 35 | Attoliter Chemistry for Nanoscale Functionalization of Graphene. *ACS Applied Materials & Interfaces*, **2016**, 8, 33371-33376 | 9.5 | 13 |
| 34 | Initial Studies Directed toward the Rational Design of Aqueous Graphene Dispersants. *ACS Omega*, **2019**, 4, 1969-1981 | 3.9 | 12 |
| 33 | Self-assembly of one dimensional DNA-templated structures. *Journal of Materials Chemistry C*, **2014**, 2, 6895-6920 | 7.1 | 12 |
| 32 | Plasmonic enhancement of SERS measured on molecules in carbon nanotubes. *Faraday Discussions*, **2017**, 205, 85-103 | 3.6 | 12 |

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| 31 | Applications of chirality-sorted individual single-wall carbon nanotube devices. *Journal of Materials Chemistry*, **2012**, 22, 7083 | | 12 |
| 30 | Strained graphene as a local probe for plasmon-enhanced Raman scattering by gold nanostructures. *Physica Status Solidi - Rapid Research Letters*, **2013**, 7, 1067-1070 | 2.5 | 10 |
| 29 | Imaging conduction pathways in carbon nanotube network transistors by voltage-contrast scanning electron microscopy. *Nanotechnology*, **2011**, 22, 265715 | 3.4 | 9 |
| 28 | TGF-β-loaded graphene oxide - self-assembling peptide hybrid hydrogels as functional 3D scaffolds for the regeneration of the nucleus pulposus. *Acta Biomaterialia*, **2021**, 127, 116-130 | 10.8 | 8 |
| 27 | Raman Mapping Analysis of Graphene-Integrated Silicon Micro-Ring Resonators. *Nanoscale Research Letters*, **2017**, 12, 600 | 5 | 7 |
| 26 | Bottom-up assembly of nano-carbon devices by dielectrophoresis. *Physica Status Solidi (B): Basic Research*, **2013**, 250, 2505-2517 | 1.3 | 7 |
| 25 | Elastic flow instabilities and macroscopic textures in graphene oxide lyotropic liquid crystals. *Npj 2D Materials and Applications*, **2021**, 5, | 8.8 | 7 |
| 24 | Resonant, Plasmonic Raman Enhancement of α6T Molecules Encapsulated in Carbon Nanotubes. *Journal of Physical Chemistry C*, **2019**, 123, 10578-10585 | 3.8 | 6 |
| 23 | Plasmon-enhanced Raman scattering by suspended carbon nanotubes. *Physica Status Solidi - Rapid Research Letters*, **2014**, 08, 785-789 | 2.5 | 6 |
| 22 | Growth, dispersion, and electronic devices of nitrogen-doped single-wall carbon nanotubes. *Physica Status Solidi (B): Basic Research*, **2012**, 249, 2416-2419 | 1.3 | 6 |
| 21 | On the biocompatibility of graphene oxide towards vascular smooth muscle cells. *Nanotechnology*, **2021**, 32, 055101 | 3.4 | 6 |
| 20 | Graphene Properties and Characterization **2013**, 39-82 | | 5 |
| 19 | Determination of the quasi-TE mode (in-plane) graphene linear absorption coefficient via integration with silicon-on-insulator racetrack cavity resonators. *Optics Express*, **2014**, 22, 18625-32 | 3.3 | 5 |
| 18 | Probing hotspots of plasmon-enhanced Raman scattering by nanomanipulation of carbon nanotubes. *Nanotechnology*, **2018**, 29, 465710 | 3.4 | 5 |
| 17 | Nanometre electron beam sculpting of suspended graphene and hexagonal boron nitride heterostructures. *2D Materials*, **2019**, 6, 025032 | 5.9 | 4 |
| 16 | Fabrication and electrochemical response of pristine graphene ultramicroelectrodes. *Carbon*, **2021**, 177, 207-215 | 10.4 | 4 |
| 15 | Graphene and water-based elastomer nanocomposites - a review. *Nanoscale*, **2021**, 13, 9505-9540 | 7.7 | 4 |
| 14 | Scalable bottom-up assembly of suspended carbon nanotube and graphene devices by dielectrophoresis. *Physica Status Solidi - Rapid Research Letters*, **2015**, 9, 539-543 | 2.5 | 3 |

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| 13 | Ternary nanocomposites of reduced graphene oxide, polyaniline and hexaniobate: hierarchical architecture and high polaron formation. *Beilstein Journal of Nanotechnology*, **2018**, 9, 2936-2946 | 3 | 3 |
| 12 | Graphene. *Springer Handbooks*, **2017**, 363-391 | 1.3 | 2 |
| 11 | Graphene Oxide Substrate Promotes Neurotrophic Factor Secretion and Survival of Human Schwann-Like Adipose Mesenchymal Stromal Cells. *Advanced Biology*, **2021**, 5, e2000271 | | 2 |
| 10 | Development of an open-source thermally stabilized quartz crystal microbalance instrument for biomolecule-substrate binding assays on gold and graphene. *Analytica Chimica Acta*, **2021**, 1156, 338329 | 6.6 | 2 |
| 9 | High-grip and hard-wearing graphene reinforced polyurethane coatings. *Composites Part B: Engineering*, **2021**, 213, 108727 | 10 | 2 |
| 8 | Hybrid molecular/mineral lyotropic liquid crystal system of CTAB and graphene oxide in water. *Carbon*, **2021**, 173, 105-114 | 10.4 | 2 |
| 7 | Engaging a wider audience. *Nature Nanotechnology*, **2014**, 9, 868 | 28.7 | 1 |
| 6 | Multiplexed Biomimetic Lipid Membranes on Graphene by Dip-Pen Nanolithography. *Microscopy and Microanalysis*, **2014**, 20, 2058-2059 | 0.5 | 1 |
| 5 | Confinement effects on lyotropic nematic liquid crystal phases of graphene oxide dispersions. *2D Materials*, **2017**, 4, | 5.9 | 1 |
| 4 | Protein spot arrays on graphene oxide coatings for efficient single-cell capture.. *Scientific Reports*, **2022**, 12, 3895 | 4.9 | 0 |
| 3 | A Chemists Method for Making Pure Clean Graphene. *Carbon Nanostructures*, **2012**, 129-136 | 0.6 | |
| 2 | Fabrication and modelling of fractal, biomimetic, micro and nano-topographical surfaces. *Bioinspiration and Biomimetics*, **2016**, 11, 046009 | 2.6 | |
| 1 | Biochemical functionalization of graphene oxide for directing stem cell differentiation. *Journal of Molecular Structure*, **2021**, 1249, 131578 | 3.4 | |