

Jason J Davis

List of Publications by Citations

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123
papers

5,481
citations

44
h-index

69
g-index

131
ext. papers

6,157
ext. citations

8.7
avg, IF

6.3
L-index

| # | Paper | IF | Citations |
|-----|--|------|-----------|
| 123 | Electrical biosensors and the label free detection of protein disease biomarkers. <i>Chemical Society Reviews</i> , 2013 , 42, 5944-62 | 58.5 | 329 |
| 122 | Protein electrochemistry at carbon nanotube electrodes. <i>Journal of Electroanalytical Chemistry</i> , 1997 , 440, 279-282 | 4.1 | 278 |
| 121 | Chemical and biochemical sensing with modified single walled carbon nanotubes. <i>Chemistry - A European Journal</i> , 2003 , 9, 3732-9 | 4.8 | 252 |
| 120 | An optimised electrochemical biosensor for the label-free detection of C-reactive protein in blood. <i>Biosensors and Bioelectronics</i> , 2013 , 39, 94-8 | 11.8 | 161 |
| 119 | Antifouling Strategies for Selective and Sensing. <i>Chemical Reviews</i> , 2020 , 120, 3852-3889 | 68.1 | 153 |
| 118 | Reversible luminescence switching of a redox-active ferrocene-europium dyad. <i>Journal of the American Chemical Society</i> , 2011 , 133, 11847-9 | 16.4 | 133 |
| 117 | Zinc metalloporphyrin-functionalised nanoparticle anion sensors. <i>Chemical Communications</i> , 2004 , 414-55.8 | 11.5 | 115 |
| 116 | The label free picomolar detection of insulin in blood serum. <i>Biosensors and Bioelectronics</i> , 2013 , 39, 21-5 | 11.8 | 114 |
| 115 | Interlocked host rotaxane and catenane structures for sensing charged guest species via optical and electrochemical methodologies. <i>Organic and Biomolecular Chemistry</i> , 2009 , 7, 415-24 | 3.9 | 112 |
| 114 | Environmentally responsive MRI contrast agents. <i>Chemical Communications</i> , 2013 , 49, 9704-21 | 5.8 | 108 |
| 113 | Exploring the electronic and mechanical properties of protein using conducting atomic force microscopy. <i>Journal of the American Chemical Society</i> , 2004 , 126, 5601-9 | 16.4 | 108 |
| 112 | Anion recognition and redox sensing amplification by self-assembled monolayers of 1,1'-bis(alkyl-N-amido)ferrocene. <i>Chemical Communications</i> , 2002 , 1716-7 | 5.8 | 91 |
| 111 | Ultrasensitive label free electrical detection of insulin in neat blood serum. <i>Analytical Chemistry</i> , 2013 , 85, 4129-34 | 7.8 | 88 |
| 110 | Mechanically interlocked and switchable molecules at surfaces. <i>Chemical Communications</i> , 2010 , 46, 54-63.8 | 5.8 | 81 |
| 109 | Anion templated surface assembly of a redox-active sensory rotaxane. <i>Chemical Communications</i> , 2007 , 2234-6 | 5.8 | 77 |
| 108 | Multimodality and nanoparticles in medical imaging. <i>Dalton Transactions</i> , 2011 , 40, 6087-103 | 4.3 | 76 |
| 107 | Sulfate anion templation of a neutral pseudorotaxane assembly using an indolocarbazole threading component. <i>Chemical Communications</i> , 2008 , 3154-6 | 5.8 | 73 |

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| 106 | Electrochemical Anion Sensing: Supramolecular Approaches. <i>Chemical Reviews</i> , 2020 , 120, 1888-1935 | 68.1 | 73 |
| 105 | Capacitance spectroscopy: a versatile approach to resolving the redox density of states and kinetics in redox-active self-assembled monolayers. <i>Journal of Physical Chemistry B</i> , 2012 , 116, 8822-9 | 3.4 | 70 |
| 104 | A dielectric model of self-assembled monolayer interfaces by capacitive spectroscopy. <i>Langmuir</i> , 2012 , 28, 9689-99 | 4 | 68 |
| 103 | Halogen bonding-enhanced electrochemical halide anion sensing by redox-active ferrocene receptors. <i>Chemical Communications</i> , 2015 , 51, 14640-3 | 5.8 | 67 |
| 102 | Fluorescent cyclic voltammetry of immobilized azurin: direct observation of thermodynamic and kinetic heterogeneity. <i>Angewandte Chemie - International Edition</i> , 2010 , 49, 5776-9 | 16.4 | 67 |
| 101 | Low fouling label-free DNA sensor based on polyethylene glycols decorated with gold nanoparticles for the detection of breast cancer biomarkers. <i>Biosensors and Bioelectronics</i> , 2015 , 71, 51-56 | 11.8 | 64 |
| 100 | Label free redox capacitive biosensing. <i>Biosensors and Bioelectronics</i> , 2013 , 50, 437-40 | 11.8 | 64 |
| 99 | Protein adsorption at a gold electrode studied by insitu scanning tunnelling microscopy. <i>New Journal of Chemistry</i> , 1998 , 22, 1119-1123 | 3.6 | 61 |
| 98 | Sensitive affimer and antibody based impedimetric label-free assays for C-reactive protein. <i>Analytical Chemistry</i> , 2012 , 84, 6553-60 | 7.8 | 60 |
| 97 | Electrochemical Aptasensor for Ultralow Fouling Cancer Cell Quantification in Complex Biological Media Based on Designed Branched Peptides. <i>Analytical Chemistry</i> , 2019 , 91, 8334-8340 | 7.8 | 59 |
| 96 | Serum neuronal exosomes predict and differentiate Parkinson's disease from atypical parkinsonism. <i>Journal of Neurology, Neurosurgery and Psychiatry</i> , 2020 , 91, 720-729 | 5.5 | 57 |
| 95 | Label-free capacitive diagnostics: exploiting local redox probe state occupancy. <i>Analytical Chemistry</i> , 2014 , 86, 2559-64 | 7.8 | 55 |
| 94 | The robust electrochemical detection of a Parkinson's disease marker in whole blood sera. <i>Chemical Science</i> , 2012 , 3, 3468 | 9.4 | 55 |
| 93 | The scanning probe microscopy of metalloproteins and metalloenzymes. <i>Chemical Communications</i> , 2002 , 393-401 | 5.8 | 55 |
| 92 | Low Fouling Protein Detection in Complex Biological Media Supported by a Designed Multifunctional Peptide. <i>ACS Sensors</i> , 2018 , 3, 1210-1216 | 9.2 | 55 |
| 91 | Nanoparticle-Based Paramagnetic Contrast Agents for Magnetic Resonance Imaging. <i>Contrast Media and Molecular Imaging</i> , 2019 , 2019, 1845637 | 3.2 | 54 |
| 90 | Solution and surface-confined chloride anion templated redox-active ferrocene catenanes. <i>Chemical Science</i> , 2012 , 3, 1080 | 9.4 | 54 |
| 89 | Elucidating capacitance and resistance terms in confined electroactive molecular layers. <i>Analytical Chemistry</i> , 2013 , 85, 411-7 | 7.8 | 54 |

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| 88 | Label-free sub-picomolar protein detection with field-effect transistors. <i>Analytical Chemistry</i> , 2010 , 82, 3531-6 | 7.8 | 54 |
| 87 | Peptide aptamers in label-free protein detection: 1. Characterization of the immobilized scaffold. <i>Analytical Chemistry</i> , 2007 , 79, 1089-96 | 7.8 | 52 |
| 86 | Ultrasensitive and selective voltammetric aptasensor for dopamine based on a conducting polymer nanocomposite doped with graphene oxide. <i>Mikrochimica Acta</i> , 2015 , 182, 1123-1129 | 5.8 | 49 |
| 85 | Measuring quantum capacitance in energetically addressable molecular layers. <i>Analytical Chemistry</i> , 2014 , 86, 1337-41 | 7.8 | 49 |
| 84 | Redox and label-free array detection of protein markers in human serum. <i>Analytical Chemistry</i> , 2014 , 86, 5553-8 | 7.8 | 48 |
| 83 | Spatially controlled Suzuki and Heck catalytic molecular coupling. <i>Journal of the American Chemical Society</i> , 2006 , 128, 14135-41 | 16.4 | 48 |
| 82 | Location-tuned relaxivity in Gd-doped mesoporous silica nanoparticles. <i>Journal of Materials Chemistry</i> , 2012 , 22, 22848-22850 | | 46 |
| 81 | Metalloprotein tunnel junctions: compressional modulation of barrier height and transport mechanism. <i>Faraday Discussions</i> , 2006 , 131, 167-79; discussion 205-20 | 3.6 | 46 |
| 80 | Concentration-Normalized Electroanalytical Assaying of Exosomal Markers. <i>Analytical Chemistry</i> , 2017 , 89, 3184-3190 | 7.8 | 45 |
| 79 | Redox Capacitive Assaying of C-Reactive Protein at a Peptide Supported Aptamer Interface. <i>Analytical Chemistry</i> , 2018 , 90, 3005-3008 | 7.8 | 44 |
| 78 | Amplification of anion sensing by disulfide functionalized ferrocene and ferrocene-calixarene receptors adsorbed onto gold surfaces. <i>Dalton Transactions</i> , 2010 , 39, 6532-41 | 4.3 | 44 |
| 77 | Spatially resolved Suzuki coupling reaction initiated and controlled using a catalytic AFM probe. <i>Journal of the American Chemical Society</i> , 2005 , 127, 13082-3 | 16.4 | 42 |
| 76 | A scanning tunnelling study of immobilised cytochrome P450cam. <i>Faraday Discussions</i> , 2000 , 15-22; discussion 67-75 | 3.6 | 42 |
| 75 | Elucidating redox-level dispersion and local dielectric effects within electroactive molecular films. <i>Analytical Chemistry</i> , 2014 , 86, 1997-2004 | 7.8 | 41 |
| 74 | Anion sensing by solution- and surface-assembled osmium(II) bipyridyl rotaxanes. <i>Chemistry - A European Journal</i> , 2013 , 19, 15898-906 | 4.8 | 41 |
| 73 | Peptide aptamers in label-free protein detection: 2. Chemical optimization and detection of distinct protein isoforms. <i>Analytical Chemistry</i> , 2009 , 81, 3314-20 | 7.8 | 41 |
| 72 | Anion templated formation of pseudorotaxane and rotaxane monolayers on gold from neutral components. <i>Langmuir</i> , 2009 , 25, 2935-40 | 4 | 41 |
| 71 | Capacitance spectroscopy and density functional theory. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 9375-82 | 3.6 | 39 |

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| 70 | Force dependent metalloprotein conductance by conducting atomic force microscopy. <i>Nanotechnology</i> , 2003 , 14, 1023-1028 | 3.4 | 39 |
| 69 | A halogen-bonding foldamer molecular film for selective reagentless anion sensing in water. <i>Chemical Communications</i> , 2019 , 55, 4849-4852 | 5.8 | 35 |
| 68 | A dual marker label free electrochemical assay for Flavivirus dengue diagnosis. <i>Biosensors and Bioelectronics</i> , 2018 , 100, 519-525 | 11.8 | 35 |
| 67 | Surface-attached sensors for cation and anion recognition. <i>Analytical and Bioanalytical Chemistry</i> , 2012 , 402, 1739-48 | 4.4 | 35 |
| 66 | Anion Sensing Porphyrin Functionalized Nanoparticles. <i>Journal of Inorganic and Organometallic Polymers and Materials</i> , 2008 , 18, 32-40 | 3.2 | 35 |
| 65 | The Diagnostic Utility of Electrochemical Impedance. <i>Electroanalysis</i> , 2014 , 26, 1249-1258 | 3 | 34 |
| 64 | Genetic modulation of metalloprotein electron transfer at bare gold. <i>Chemical Communications</i> , 2003 , 576-7 | 5.8 | 34 |
| 63 | Impittance electroanalysis in diagnostics. <i>Analytical Chemistry</i> , 2015 , 87, 944-50 | 7.8 | 29 |
| 62 | Exploiting lanthanide luminescence in supramolecular assemblies. <i>Chemical Communications</i> , 2014 , 50, 5678-87 | 5.8 | 28 |
| 61 | The application of electrochemical scanning probe microscopy to the interpretation of metalloprotein voltammetry. <i>Coordination Chemistry Reviews</i> , 2000 , 200-202, 411-442 | 23.2 | 28 |
| 60 | Exploiting the mechanical bond for molecular recognition and sensing of charged species. <i>Materials Chemistry Frontiers</i> , 2020 , 4, 1052-1073 | 7.8 | 28 |
| 59 | Enhanced photocurrent in engineered bacteriorhodopsin monolayer. <i>Journal of Physical Chemistry B</i> , 2012 , 116, 683-9 | 3.4 | 27 |
| 58 | Sensing nitrite through a pseudoazurin-nitrite reductase electron transfer relay. <i>ChemPhysChem</i> , 2005 , 6, 1114-20 | 3.2 | 27 |
| 57 | Graphene-based protein biomarker detection. <i>Bioanalysis</i> , 2015 , 7, 725-42 | 2.1 | 26 |
| 56 | Quantum capacitance as a reagentless molecular sensing element. <i>Nanoscale</i> , 2017 , 9, 15362-15370 | 7.7 | 26 |
| 55 | Optimized Diagnostic Assays Based on Redox Tagged Bioreceptive Interfaces. <i>Analytical Chemistry</i> , 2015 , 87, 12137-44 | 7.8 | 26 |
| 54 | Point of Care Sensors for Infectious Pathogens. <i>Analytical Chemistry</i> , 2021 , 93, 184-197 | 7.8 | 26 |
| 53 | Reagentless Redox Capacitive Assaying of C-Reactive Protein at a Polyaniline Interface. <i>Analytical Chemistry</i> , 2020 , 92, 3508-3511 | 7.8 | 25 |

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| 52 | Graphene oxide interfaces in serum based autoantibody quantification. <i>Analytical Chemistry</i> , 2015 , 87, 346-50 | 7.8 | 25 |
| 51 | Synthesis of type II/type I CdTe/CdS/ZnS quantum dots and their use in cellular imaging. <i>Journal of Materials Chemistry</i> , 2009 , 19, 8341 | | 25 |
| 50 | Force modulation and electrochemical gating of conductance in a cytochrome. <i>Journal of Physics Condensed Matter</i> , 2008 , 20, 374123 | 1.8 | 25 |
| 49 | Theoretical Analysis of the Relative Significance of Thermodynamic and Kinetic Dispersion in the dc and ac Voltammetry of Surface-Confined Molecules. <i>Langmuir</i> , 2015 , 31, 4996-5004 | 4 | 24 |
| 48 | Molecular scale conductance photoswitching in engineered bacteriorhodopsin. <i>Nano Letters</i> , 2012 , 12, 899-903 | 11.5 | 24 |
| 47 | Anion templated assembly of an indolocarbazole containing pseudorotaxane on beads and silica nanoparticles. <i>New Journal of Chemistry</i> , 2009 , 33, 760 | 3.6 | 24 |
| 46 | Anion induced displacement studies in naphthalene diimide containing interpenetrated and interlocked structures. <i>New Journal of Chemistry</i> , 2009 , 33, 769 | 3.6 | 24 |
| 45 | The Mesoscopic Electrochemistry of Molecular Junctions. <i>Scientific Reports</i> , 2016 , 6, 18400 | 4.9 | 23 |
| 44 | High signal contrast gating with biomodified Gd doped mesoporous nanoparticles. <i>Chemical Communications</i> , 2013 , 49, 60-2 | 5.8 | 22 |
| 43 | Acyclic halogen and hydrogen bonding diquat-containing receptors for the electrochemical sensing of anions. <i>Polyhedron</i> , 2016 , 116, 20-25 | 2.7 | 22 |
| 42 | Reversible redox modulation of a lanthanide emissive molecular film. <i>Chemical Communications</i> , 2015 , 51, 6515-7 | 5.8 | 21 |
| 41 | Neutral redox-active hydrogen- and halogen-bonding [2]rotaxanes for the electrochemical sensing of chloride. <i>Dalton Transactions</i> , 2014 , 43, 17274-82 | 4.3 | 21 |
| 40 | Charge transport and energy storage at the molecular scale: from nanoelectronics to electrochemical sensing. <i>Chemical Society Reviews</i> , 2020 , 49, 7505-7515 | 58.5 | 21 |
| 39 | Reversible recruitment and emission of DO3A-derived lanthanide complexes at ligating molecular films on gold. <i>Langmuir</i> , 2013 , 29, 1475-82 | 4 | 20 |
| 38 | Mapping the ionic fingerprints of molecular monolayers. <i>Physical Chemistry Chemical Physics</i> , 2017 , 19, 15098-15109 | 3.6 | 19 |
| 37 | Ratiometric oxygen sensing using lanthanide luminescent emitting interfaces. <i>Chemical Communications</i> , 2015 , 51, 15944-7 | 5.8 | 18 |
| 36 | Molecularly resolved protein electromechanical properties. <i>Journal of Physical Chemistry B</i> , 2007 , 111, 9062-8 | 3.4 | 18 |
| 35 | Molecular electron transfer of protein junctions characterised by conducting atomic force microscopy. <i>Colloids and Surfaces B: Biointerfaces</i> , 2005 , 40, 189-94 | 6 | 18 |

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| 34 | Dy-DOTA integrated mesoporous silica nanoparticles as promising ultrahigh field magnetic resonance imaging contrast agents. <i>Nanoscale</i> , 2018 , 10, 21041-21045 | 7.7 | 18 |
| 33 | Interfacial sensing: surface assembled molecular receptors. <i>Chemical Communications</i> , 2005 , 3509-13 | 5.8 | 16 |
| 32 | High resolution scanning force microscopy of cardiac myocytes. <i>Cell Biology International</i> , 2001 , 25, 1271-7 | 4.7 | 16 |
| 31 | Enhanced voltammetric anion sensing at halogen and hydrogen bonding ferrocenyl SAMs. <i>Chemical Science</i> , 2020 , 12, 2433-2440 | 9.4 | 16 |
| 30 | Large Amplitude Conductance Gating in a Wired Redox Molecule. <i>Journal of Physical Chemistry Letters</i> , 2010 , 1, 1541-1546 | 6.4 | 14 |
| 29 | Facile Impedimetric Analysis of Neuronal Exosome Markers in Parkinson's Disease Diagnostics. <i>Analytical Chemistry</i> , 2020 , 92, 13647-13651 | 7.8 | 14 |
| 28 | Solvent Effects in Halogen and Hydrogen Bonding Mediated Electrochemical Anion Sensing in Aqueous Solution and at Interfaces. <i>Chemistry - A European Journal</i> , 2021 , 27, 10201-10209 | 4.8 | 14 |
| 27 | Halogen Bonding Tetraphenylethene Anion Receptors: Anion-Induced Emissive Aggregates and Photoswitchable Recognition. <i>Angewandte Chemie - International Edition</i> , 2021 , 60, 19442-19450 | 16.4 | 14 |
| 26 | Mechanistic studies of AFM probe-driven Suzuki and Heck molecular coupling. <i>Nanotechnology</i> , 2010 , 21, 265302 | 3.4 | 13 |
| 25 | Mesoporous Silica Nanoparticles in Bioimaging. <i>Materials</i> , 2020 , 13, | 3.5 | 13 |
| 24 | Ultrasensitive Impedimetric Immunosensor for the Detection of C-Reactive Protein in Blood at Surface-Initiated-Reversible Addition-Fragmentation Chain Transfer Generated Poly(2-hydroxyethyl methacrylate) Brushes. <i>Analytical Chemistry</i> , 2020 , 92, 4707-4710 | 7.8 | 12 |
| 23 | An impedimetric assay of β -synuclein autoantibodies in early stage Parkinson's disease. <i>RSC Advances</i> , 2014 , 4, 58773-58777 | 3.7 | 12 |
| 22 | The nanoscopic principles of capacitive ion sensing interfaces. <i>Physical Chemistry Chemical Physics</i> , 2020 , 22, 3770-3774 | 3.6 | 11 |
| 21 | Engineered bacteriorhodopsin: a molecular scale potential switch. <i>Chemistry - A European Journal</i> , 2012 , 18, 5632-6 | 4.8 | 11 |
| 20 | Functional Molecular Interfaces for Impedance-Based Diagnostics. <i>Annual Review of Analytical Chemistry</i> , 2020 , 13, 183-200 | 12.5 | 10 |
| 19 | Tunnelling conductance of vectorial porphyrin monolayers. <i>Journal of Materials Chemistry</i> , 2008 , 18, 3109 | | 10 |
| 18 | Magnetic Nanoparticles Supporting Bio-responsive / Magnetic Resonance Imaging. <i>Materials</i> , 2019 , 12, | 3.5 | 10 |
| 17 | Engineering cytochrome-modified silica nanoparticles to induce programmed cell death. <i>Chemistry - A European Journal</i> , 2013 , 19, 17891-8 | 4.8 | 9 |

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|----|--|------|---|
| 16 | Validation of Eynuclein in L1CAM-Immunocaptured Exosomes as a Biomarker for the Stratification of Parkinsonian Syndromes. <i>Movement Disorders</i> , 2021 , 36, 2663-2669 | 7 | 9 |
| 15 | A facile measurement of heterogeneous electron transfer kinetics. <i>Analytical Chemistry</i> , 2013 , 85, 10920-7 | 7.8 | 6 |
| 14 | Ligation driven (19)F relaxation enhancement in self-assembled Ln(III) complexes. <i>Chemical Communications</i> , 2015 , 51, 2918-20 | 5.8 | 6 |
| 13 | Multiplexed Profiling of Extracellular Vesicles for Biomarker Development. <i>Nano-Micro Letters</i> , 2021 , 14, 3 | 19.5 | 6 |
| 12 | Homogeneous functional self-assembled monolayers: Faradaic impedance baseline signal drift suppression for high-sensitivity immunosensing of C-reactive protein. <i>Journal of Electroanalytical Chemistry</i> , 2020 , 856, 113675 | 4.1 | 5 |
| 11 | Water gated contrast switching with polymer-silica hybrid nanoparticles. <i>Chemical Communications</i> , 2019 , 55, 8540-8543 | 5.8 | 4 |
| 10 | Open Circuit Potential as a Tool for the Assessment of Binding Kinetics and Reagentless Protein Quantitation. <i>Analytical Chemistry</i> , 2021 , 93, 14748-14754 | 7.8 | 4 |
| 9 | A Quantification of Target Protein Biomarkers in Complex Media by Faradaic Shotgun Tagging.. <i>Analytical Chemistry</i> , 2022 , | 7.8 | 3 |
| 8 | Continuous and Polarization-Tuned Redox Capacitive Anion Sensing at Electroactive Interfaces. <i>Journal of the American Chemical Society</i> , 2021 , 143, 19199-19206 | 16.4 | 3 |
| 7 | Introducing polymer conductance in diagnostically relevant transduction. <i>Biosensors and Bioelectronics</i> , 2021 , 172, 112705 | 11.8 | 3 |
| 6 | Halogen Bonding Tetraphenylethene Anion Receptors: Anion-Induced Emissive Aggregates and Photoswitchable Recognition. <i>Angewandte Chemie</i> , 2021 , 133, 19591-19599 | 3.6 | 3 |
| 5 | Real-time Voltammetric Anion Sensing Under Flow*. <i>Chemistry - A European Journal</i> , 2021 , 27, 17700 | 4.8 | 1 |
| 4 | Characterising the biosensing interface. <i>Analytica Chimica Acta</i> , 2022 , 339759 | 6.6 | 1 |
| 3 | Applying atomic force microscopy to studies in cardiac physiology. <i>Methods in Molecular Biology</i> , 2004 , 242, 161-78 | 1.4 | |
| 2 | Promoting high contrast in Dy-doped MSNs through Curie effects.. <i>Journal of Materials Chemistry B</i> , 2022 , 10, 302-305 | 7.3 | |
| 1 | EXPLORING TUNNEL TRANSPORT THROUGH PROTEIN AT THE MOLECULAR LEVEL. <i>Series on Iraq War and Its Consequences</i> , 2007 , 167-193 | | |