

# Paula E Colavita

## List of Publications by Year in descending order

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79  
papers

2,418  
citations

147566

31  
h-index

223531

46  
g-index

82  
all docs

82  
docs citations

82  
times ranked

3679  
citing authors

| #  | ARTICLE   | IF   | CITATIONS |
|----|---|------|-----------|
| 1  | Low-Overpotential High-Activity Mixed Manganese and Ruthenium Oxide Electrocatalysts for Oxygen Evolution Reaction in Alkaline Media. <i>ACS Catalysis</i> , 2016, 6, 2408-2415.  | 5.5  | 139       |
| 2  | Fluorine-Fluorine Interactions in the Solid State: An Experimental and Theoretical Study. <i>Journal of Physical Chemistry A</i> , 2012, 116, 1435-1444.  | 1.1  | 132       |
| 3  | Development of Patterns for Digital Image Correlation Measurements at Reduced Length Scales. <i>Experimental Mechanics</i> , 2007, 47, 63-77.   | 1.1  | 123       |
| 4  | Covalent Photochemical Functionalization of Amorphous Carbon Thin Films for Integrated Real-Time Biosensing. <i>Langmuir</i> , 2006, 22, 9598-9605.   | 1.6  | 96        |
| 5  | Functionalized Vertically Aligned Carbon Nanofibers as Scaffolds for Immobilization and Electrochemical Detection of Redox-Active Proteins. <i>Chemistry of Materials</i> , 2006, 18, 4415-4422.  | 3.2  | 77        |
| 6  | Green Synthesis of Metal Nanoparticles via Natural Extracts: The Biogenic Nanoparticle Corona and Its Effects on Reactivity. <i>ACS Sustainable Chemistry and Engineering</i> , 2015, 3, 1610-1617.                                       | 3.2  | 75        |
| 7  | Photochemical Functionalization of Gallium Nitride Thin Films with Molecular and Biomolecular Layers. <i>Langmuir</i> , 2006, 22, 8121-8126.  | 1.6  | 74        |
| 8  | Photochemical Grafting of <i>n</i> -Alkenes onto Carbon Surfaces: the Role of Photoelectron Ejection. <i>Journal of the American Chemical Society</i> , 2007, 129, 13554-13565.   | 6.6  | 74        |
| 9  | Electrochromic Nickel Oxide Films for Smart Window Applications. <i>International Journal of Electrochemical Science</i> , 2016, 11, 6636-6647.   | 0.5  | 60        |
| 10 | Untangling Cooperative Effects of Pyridinic and Graphitic Nitrogen Sites at Metal-Free N-Doped Carbon Electrocatalysts for the Oxygen Reduction Reaction. <i>Small</i> , 2019, 15, e1902081.  | 5.2  | 57        |
| 11 | Aggregation of protein therapeutics enhances their immunogenicity: causes and mitigation strategies. <i>RSC Chemical Biology</i> , 2021, 2, 1004-1020.  | 2.0  | 55        |
| 12 | Grafting of molecular layers to oxidized gallium nitride surfaces via phosphonic acid linkages. <i>Surface Science</i> , 2008, 602, 2382-2388.  | 0.8  | 49        |
| 13 | The goldilocks electrolyte: examining the performance of iron/nickel oxide thin films as catalysts for electrochemical water splitting in various aqueous NaOH solutions. <i>Journal of Materials Chemistry A</i> , 2016, 4, 11397-11407. | 5.2  | 47        |
| 14 | Development of patterns for nanoscale strain measurements: I. Fabrication of imprinted Au webs for polymeric materials. <i>Nanotechnology</i> , 2004, 15, 1812-1817.  | 1.3  | 45        |
| 15 | Growth and Characterization of a Porous Aluminum Oxide Film Formed on an Electrically Insulating Support. <i>Electrochemical and Solid-State Letters</i> , 2003, 6, B42.  | 2.2  | 44        |
| 16 | Quantifying Graphitic Edge Exposure in Graphene-Based Materials and Its Role in Oxygen Reduction Reactions. <i>ACS Catalysis</i> , 2016, 6, 5215-5221.  | 5.5  | 44        |
| 17 | Functional Self-Assembled Monolayers for Optimized Photoinduced Charge Transfer in Organic Field Effect Transistors. <i>Advanced Materials</i> , 2007, 19, 4353-4357.   | 11.1 | 42        |
| 18 | EXAFS analysis of the L3 edge of Ce in CeO2: effects of multi-electron excitations and final-state mixed valence. <i>Journal of Synchrotron Radiation</i> , 1999, 6, 34-42.   | 1.0  | 41        |

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|----|---|-----|-----------|
| 19 | Construction and Characterization of a Nanowell Electrode Array. <i>Nano Letters</i> , 2002, 2, 641-645.  | 4.5 | 41        |
| 20 | Carbon tetrachloride hydrodechlorination with organometallics-based platinum and palladium catalysts on MgO. <i>Journal of Molecular Catalysis A</i> , 2002, 182-183, 157-166.                              | 4.8 | 38        |
| 21 | Photochemical Grafting of Alkenes onto Carbon Surfaces: Identifying the Roles of Electrons and Holes. <i>Journal of Physical Chemistry C</i> , 2010, 114, 4067-4074.  | 1.5 | 38        |
| 22 | Improving the performance of porous nickel foam for water oxidation using hydrothermally prepared Ni and Fe metal oxides. <i>Sustainable Energy and Fuels</i> , 2017, 1, 207-216.                           | 2.5 | 38        |
| 23 | Theoretical study of the valence and core photoemission spectra of C60. <i>Physical Chemistry Chemical Physics</i> , 2001, 3, 4481-4487.  | 1.3 | 36        |
| 24 | Spontaneous Grafting of Nitrophenyl Groups on Amorphous Carbon Thin Films: A Structure-Reactivity Investigation. <i>Chemistry of Materials</i> , 2012, 24, 1031-1040.                                       | 3.2 | 36        |
| 25 | Clustering Effects on Discontinuous Gold Film NanoCells. <i>Journal of Nanoscience and Nanotechnology</i> , 2004, 4, 907-917.   | 0.9 | 34        |
| 26 | Valence and core photoemission in M@C60 (M = Be, Mg, Ca). <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2002, 35, 1421-1438.   | 0.6 | 33        |
| 27 | Incandescent porous carbon microspheres to light up cells: solution phenomena and cellular uptake. <i>Journal of Materials Chemistry</i> , 2012, 22, 432-439.   | 6.7 | 33        |
| 28 | Experimental and Computational Study of Dopamine as an Electrochemical Probe of the Surface Nanostructure of Graphitized N-Doped Carbon. <i>Journal of Physical Chemistry C</i> , 2018, 122, 20763-20773.   | 1.5 | 33        |
| 29 | In Situ and Real Time Characterization of Spontaneous Grafting of Aryldiazonium Salts at Carbon Surfaces. <i>Chemistry of Materials</i> , 2013, 25, 1144-1152.  | 3.2 | 32        |
| 30 | Electrocatalysis of N-doped carbons in the oxygen reduction reaction as a function of pH: N-sites and scaffold effects. <i>Carbon</i> , 2019, 148, 224-230.   | 5.4 | 32        |
| 31 | Direct Photopatterning and SEM Imaging of Molecular Monolayers on Diamond Surfaces: Mechanistic Insights into UV-Initiated Molecular Grafting. <i>Langmuir</i> , 2007, 23, 11623-11630.                     | 1.6 | 31        |
| 32 | Template-free synthesis of mesoporous manganese oxides with catalytic activity in the oxygen evolution reaction. <i>Sustainable Energy and Fuels</i> , 2017, 1, 780-788.                                    | 2.5 | 31        |
| 33 | Characterisation of heterogeneous catalysts by EXAFS. <i>Catalysis Today</i> , 1998, 41, 261-275.   | 2.2 | 30        |
| 34 | Modulation of Protein Fouling and Interfacial Properties at Carbon Surfaces via Immobilization of Glycans Using Aryldiazonium Chemistry. <i>Scientific Reports</i> , 2016, 6, 24840.                        | 1.6 | 30        |
| 35 | Enhanced Antifouling Properties of Carbohydrate Coated Poly(ether sulfone) Membranes. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 17238-17246.   | 4.0 | 29        |
| 36 | Enhancement of Photochemical Grafting of Terminal Alkenes at Surfaces via Molecular Mediators: The Role of Surface-Bound Electron Acceptors. <i>Journal of Physical Chemistry C</i> , 2008, 112, 5102-5112. | 1.5 | 28        |

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|----|---|-----|-----------|
| 37 | Emerging trends in metal oxide electrocatalysis: Bifunctional oxygen catalysis, synergies and new insights from in situ studies. <i>Current Opinion in Electrochemistry</i> , 2018, 7, 208-215.                 | 2.5 | 27        |
| 38 | Template-free ultraspray pyrolysis synthesis of N/Fe-doped carbon microspheres for oxygen reduction electrocatalysis. <i>Journal of Materials Chemistry A</i> , 2015, 3, 18920-18927.                           | 5.2 | 25        |
| 39 | Influence of Surface Termination and Electronic Structure on the Photochemical Grafting of Alkenes to Carbon Surfaces. <i>Journal of Physical Chemistry C</i> , 2009, 113, 1526-1535.                           | 1.5 | 23        |
| 40 | Nanotextured gold coatings on carbon nanofiber scaffolds as ultrahigh surface-area electrodes. <i>Journal of Power Sources</i> , 2012, 198, 393-401.  | 4.0 | 22        |
| 41 | Carbohydrate Coatings via Aryldiazonium Chemistry for Surface Biomimicry. <i>Chemistry of Materials</i> , 2013, 25, 4122-4128.  | 3.2 | 22        |
| 42 | Combined Optoelectronic and Electrochemical Study of Nitrogenated Carbon Electrodes. <i>Journal of Physical Chemistry C</i> , 2017, 121, 6596-6604.   | 1.5 | 22        |
| 43 | Influence of carbon nanostructure and oxygen moieties on dopamine adsorption and charge transfer kinetics at glassy carbon surfaces. <i>Electrochimica Acta</i> , 2019, 304, 221-230.                           | 2.6 | 21        |
| 44 | Effects of Metal Coating on Self-Assembled Monolayers on Gold. 1. Copper on Dodecanethiol and Octadecanethiol. <i>Langmuir</i> , 2002, 18, 8503-8509.   | 1.6 | 19        |
| 45 | Single-crystal silicon/silicon dioxide multilayer heterostructures based on nanomembrane transfer. <i>Applied Physics Letters</i> , 2007, 90, 183107.   | 1.5 | 19        |
| 46 | In Situ Studies of the Adsorption Kinetics of 4-Nitrobenzenediazonium Salt on Gold. <i>Langmuir</i> , 2011, 27, 13029-13036.  | 1.6 | 19        |
| 47 | Thermally Prepared Mn <sub>2</sub> O <sub>3</sub> /RuO <sub>2</sub> /Ru Thin Films as Highly Active Catalysts for the Oxygen Evolution Reaction in Alkaline Media. <i>ChemElectroChem</i> , 2016, 3, 1847-1855. | 1.7 | 19        |
| 48 | Photocatalytic Initiation of Radical Thiol-ene Reactions Using Carbon-Bi <sub>2</sub> O <sub>3</sub> Nanocomposites. <i>ACS Applied Nano Materials</i> , 2018, 1, 4120-4126.                                    | 2.4 | 19        |
| 49 | The Oxygen Evolution Reaction at Manganese Oxide Films in Base: Kinetics and Mechanism. <i>ECS Transactions</i> , 2013, 53, 59-77.  | 0.3 | 18        |
| 50 | Continuous Flow Synthesis of Platinum Nanoparticles in Porous Carbon as Durable and Methanol-Tolerant Electrocatalysts for the Oxygen Reduction Reaction. <i>ChemElectroChem</i> , 2018, 5, 62-70.              | 1.7 | 18        |
| 51 | Evolution of oxygen functionalities in graphene oxide and its impact on structure and exfoliation: An oxidation time based study. <i>Materials Chemistry and Physics</i> , 2018, 220, 417-425.                  | 2.0 | 16        |
| 52 | Capacitive storage at nitrogen doped amorphous carbon electrodes: structural and chemical effects of nitrogen incorporation. <i>RSC Advances</i> , 2019, 9, 4063-4071.  | 1.7 | 15        |
| 53 | Natural reducing agents for electroless nanoparticle deposition: Mild synthesis of metal/carbon nanostructured microspheres. <i>Materials Chemistry and Physics</i> , 2013, 140, 343-349.                       | 2.0 | 14        |
| 54 | Stable hydrophilic poly(dimethylsiloxane) via glycan surface functionalization. <i>Polymer</i> , 2016, 106, 1-7.  | 1.8 | 14        |

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|----|--|------|-----------|
| 55 | Nanoplasmonic Sensing at the Carbon-Bio Interface: Study of Protein Adsorption at Graphitic and Hydrogenated Carbon Surfaces. <i>Langmuir</i> , 2017, 33, 4198-4206.   | 1.6  | 14        |
| 56 | Bioinspired Aryldiazonium Carbohydrate Coatings: Reduced Adhesion of Foulants at Polymer and Stainless Steel Surfaces in a Marine Environment. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 1141-1151.                        | 3.2  | 14        |
| 57 | Tailored glycosylated anode surfaces: Addressing the exoelectrogen bacterial community via functional layers for microbial fuel cell applications. <i>Bioelectrochemistry</i> , 2020, 136, 107621.   | 2.4  | 14        |
| 58 | Photochemically Triggered Alkylthiol Reactions on Highly Ordered Pyrolytic Graphite. <i>Journal of Physical Chemistry C</i> , 2011, 115, 10196-10204.  | 1.5  | 12        |
| 59 | Heterogeneous Charge Transfer at the Amorphous Carbon/Solution Interface: Effect on the Spontaneous Attachment of Aryldiazonium Salts. <i>Journal of Physical Chemistry C</i> , 2013, 117, 22768-22777.                                      | 1.5  | 12        |
| 60 | Effects of Metal Coating on Self-Assembled Monolayers on Gold. 2. Copper on an Oligo(Phenylene-Ethynylene) Monolayer. <i>Langmuir</i> , 2005, 21, 12268-12277.   | 1.6  | 11        |
| 61 | Determination of surface zeta potential and isoelectric point of carbon surfaces using tracer particle suspensions. <i>Surface and Interface Analysis</i> , 2017, 49, 781-787.   | 0.8  | 11        |
| 62 | Dipolar Chromophore Functional Layers in Organic Field Effect Transistors. <i>Advanced Materials</i> , 2008, 20, 4180-4184.  | 11.1 | 10        |
| 63 | Birge's Spenser Estimation of the C-H Bond Dissociation Energy in Chloroform Using Infrared, Near-Infrared, and Visible Absorption Spectroscopy. An Experiment in Physical Chemistry. <i>Journal of Chemical Education</i> , 2008, 85, 1276. | 1.1  | 10        |
| 64 | Construction of a Nanowell Electrode Array by Electrochemical Gold Stripping and Ion Bombardment. <i>Electrochemical and Solid-State Letters</i> , 2003, 6, C112.  | 2.2  | 8         |
| 65 | Nanoscaffold effects on the performance of air-cathodes for microbial fuel cells: Sustainable Fe/N-carbon electrocatalysts for the oxygen reduction reaction under neutral pH conditions. <i>Bioelectrochemistry</i> , 2021, 142, 107937.    | 2.4  | 8         |
| 66 | Electrochemical Detection of Isolated Nanoscale Defects in 2D Transition Metal Dichalcogenides. <i>Journal of Physical Chemistry C</i> , 2022, 126, 11636-11641.   | 1.5  | 8         |
| 67 | Photo-induced surface functionalization of carbon surfaces: The role of photoelectron ejection. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2008, 26, 925-931.   | 0.9  | 7         |
| 68 | Study of the spontaneous attachment of polycyclic aryldiazonium salts onto amorphous carbon substrates. <i>RSC Advances</i> , 2012, 2, 6527.   | 1.7  | 7         |
| 69 | Theoretical Study of Photoionization Processes in Fe(C5H5)2. <i>Journal of Physical Chemistry A</i> , 2001, 105, 9800-9812.  | 1.1  | 6         |
| 70 | Porous Carbon Microparticles as Vehicles for the Intracellular Delivery of Molecules. <i>Frontiers in Chemistry</i> , 2020, 8, 576175.   | 1.8  | 5         |
| 71 | Electroless deposition and characterization of Fe/FeOx nanoparticles on porous carbon microspheres: structure and surface reactivity. <i>Journal of Materials Chemistry A</i> , 2013, 1, 6043.   | 5.2  | 4         |
| 72 | Spontaneous Aryldiazonium Grafting for the Preparation of Functional Cyclodextrin-Modified Materials. <i>ACS Applied Bio Materials</i> , 2018, 1, 825-832.   | 2.3  | 4         |

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|----|--|-----|-----------|
| 73 | Reactive Plasma N-Doping of Amorphous Carbon Electrodes: Decoupling Disorder and Chemical Effects on Capacitive and Electrocatalytic Performance. <i>Frontiers in Chemistry</i> , 2020, 8, 593932.   | 1.8 | 4         |
| 74 | Bioinspired electro-permeable glycans on carbon: Fouling control for sensing in complex matrices. <i>Carbon</i> , 2020, 158, 519-526.  | 5.4 | 3         |
| 75 | Understanding the Carbon-Bio Interface: Influence of Surface Chemistry and Buffer Composition on the Adsorption of Phospholipid Liposomes at Carbon Surfaces. <i>ACS Applied Bio Materials</i> , 2020, 3, 997-1007.                                  | 2.3 | 3         |
| 76 | Laser-driven rapid functionalization of carbon surfaces and its application to the fabrication of fluorinated adsorbers. <i>RSC Advances</i> , 2016, 6, 82924-82932.   | 1.7 | 2         |
| 77 | Controlling the Carbon-Bio Interface via Glycan Functional Adlayers for Applications in Microbial Fuel Cell Bioanodes. <i>Molecules</i> , 2021, 26, 4755.  | 1.7 | 2         |
| 78 | Fine-Structure Measurements of Oxygen A Band Absorbance for Estimating the Thermodynamic Average Temperature of the Earth's Atmosphere. An Experiment in Physical and Environmental Chemistry. <i>Journal of Chemical Education</i> , 2006, 83, 263. | 1.1 | 1         |
| 79 | A Novel Method to Fabricate Multiple-layer SOI -- Single-Crystal Si Nanomembrane Transfer and Stacking. <i>ECS Transactions</i> , 2007, 6, 333-338.  | 0.3 | 0         |