# Siegfried Eigler

List of Publications by Year
in descending order



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|---|---|---|---|
| 91 papers | 4,755 citations | 126858 33 h-index | 98753 67 g-index |
| 113 all docs | 113 docs citations | 113 times ranked | 6740 citing authors |

| # | Article | IF | Citations |
| --- | --- | --- | --- |
| 1 | Chemistry with Graphene and Graphene Oxideâ€"Challenges for Synthetic Chemists. Angewandte Chemie - International Edition, 2014, 53, 7720-7738. | 7.2 | 741 |
| 2 | Visualization of defect densities in reduced graphene oxide. Carbon, 2012, 50, 3666-3673. | 5.4 | 476 |
| 3 | Wet Chemical Synthesis of Graphene. Advanced Materials, 2013, 25, 3583-3587. | 11.1 | 453 |
| 4 | Formation and Decomposition of CO<sub>2</sub> Intercalated Graphene Oxide. Chemistry of Materials, 2012, 24, 1276-1282. | 3.2 | 231 |
| 5 | In-Plane Carbon Lattice-Defect Regulating Electrochemical Oxygen Reduction to Hydrogen Peroxide Production over Nitrogen-Doped Graphene. ACS Catalysis, 2019, 9, 1283-1288. | 5.5 | 216 |
| 6 | Sulfur Species in Graphene Oxide. Chemistry - A European Journal, 2013, 19, 9490-9496. | 1.7 | 199 |
| 7 | Graphene oxide: efficiency of reducing agents. Chemical Communications, 2013, 49, 7391. | 2.2 | 118 |
| 8 | Graphene oxide: a stable carbon framework for functionalization. Journal of Materials Chemistry A, 2013, 1, 11559. | 5.2 | 114 |
| 9 | Statistical Raman Microscopy and Atomic Force Microscopy on Heterogeneous Graphene Obtained after Reduction of Graphene Oxide. Journal of Physical Chemistry C, 2014, 118, 7698-7704. | 1.5 | 95 |
| 10 | Defects in Graphene Oxide as Structural Motifs. ChemNanoMat, 2018, 4, 244-252. | 1.5 | 91 |
| 11 | Brodie's or Hummersâ€™ Method: Oxidation Conditions Determine the Structure of Graphene Oxide. Chemistry - A European Journal, 2019, 25, 8955-8959. | 1.7 | 86 |
| 12 | Graphite sulphate â€" a precursor to graphene. Chemical Communications, 2015, 51, 3162-3165. | 2.2 | 80 |
| 13 | Effect of friction on oxidative graphite intercalation and high-quality graphene formation. Nature Communications, 2018, 9, 836. | 5.8 | 79 |
| 14 | High-Quality Reduced Graphene Oxide by CVD-Assisted Annealing. Journal of Physical Chemistry C, 2016, 120, 3036-3041. | 1.5 | 76 |
| 15 | New Basic Insight into Reductive Functionalization Sequences of Single Walled Carbon Nanotubes (SWCNTs). Journal of the American Chemical Society, 2013, 135, 18385-18395. | 6.6 | 71 |
| 16 | Controlled Chemistry Approach to the Oxoâ€Functionalization of Graphene. Chemistry - A European Journal, 2016, 22, 7012-7027. | 1.7 | 68 |
| 17 | Graphene Oxide: A One- versus Two-Component Material. Journal of the American Chemical Society, 2016, 138, 11445-11448. | 6.6 | 66 |
| 18 | Endoperoxides Revealed as Origin of the Toxicity of Graphene Oxide. Angewandte Chemie - International Edition, 2016, 55, 405-407. | 7.2 | 62 |

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|---|---|---|---|
| 19 | Chemical and electrochemical synthesis of graphene oxide â€“ a generalized view. Nanoscale, 2020, 12, 12731-12740. | 2.8 | 57 |
| 20 | Controlled functionalization of graphene oxide with sodium azide. Nanoscale, 2013, 5, 12136. | 2.8 | 54 |
| 21 | Ultrathin Nanosheets of Oxoâ€functionalized Graphene Inhibit the Ion Migration in Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1902653. | 10.2 | 52 |
| 22 | Determination of the Lateral Dimension of Graphene Oxide Nanosheets Using Analytical Ultracentrifugation. Small, 2015, 11, 814-825. | 5.2 | 51 |
| 23 | Investigation of the Thermal Stability of the Carbon Framework of Graphene Oxide. Chemistry - A European Journal, 2014, 20, 984-989. | 1.7 | 49 |
| 24 | Extending the environmental lifetime of unpackaged perovskite solar cells through interfacial design. Journal of Materials Chemistry A, 2016, 4, 11604-11610. | 5.2 | 49 |
| 25 | Poly(vinylferrocene)â€"Reduced Graphene Oxide as a High Power/High Capacity Cathodic Battery Material. Advanced Energy Materials, 2016, 6, 1600108. | 10.2 | 48 |
| 26 | Kinetic and Mechanistic Studies on the Reaction of Nitric Oxide with a Water-Soluble Octa-anionic Iron(III) Porphyrin Complex. Inorganic Chemistry, 2005, 44, 7717-7731. | 1.9 | 46 |
| 27 | Degree of functionalisation dependence of individual Raman intensities in covalent graphene derivatives. Scientific Reports, 2017, 7, 45165. | 1.6 | 44 |
| 28 | Systematic evaluation of different types of graphene oxide in respect to variations in their in-plane modulus. Carbon, 2017, 114, 700-705. | 5.4 | 44 |
| 29 | Thermal Disproportionation of Oxoâ€Functionalized Graphene. Angewandte Chemie - International Edition, 2017, 56, 9222-9225. | 7.2 | 38 |
| 30 | Influence of an Extremely Negatively Charged Porphyrin on the Reversible Binding Kinetics of NO to Fe(III) and the Subsequent Reductive Nitrosylation. Inorganic Chemistry, 2007, 46, 3336-3352. | 1.9 | 35 |
| 31 | A new parameter based on graphene for characterizing transparent, conductive materials. Carbon, 2009, 47, 2936-2939. | 5.4 | 35 |
| 32 | Mechanistic Investigations of the Reaction of an Iron(III) Octa-Anionic Porphyrin Complex with Hydrogen Peroxide and the Catalyzed Oxidation of Diammonium-2,2â€²-azinobis(3-ethylbenzothiazoline-6-sulfonate). Inorganic Chemistry, 2009, 48, 7667-7678. | 1.9 | 34 |
| 33 | Highly Intact and Pure Oxoâ€Functionalized Graphene: Synthesis and Electronâ€Beamâ€Induced Reduction. Angewandte Chemie - International Edition, 2016, 55, 15771-15774. | 7.2 | 34 |
| 34 | Quantitative investigation of the fragmentation process and defect density evolution of oxo-functionalized graphene due to ultrasonication and milling. Carbon, 2016, 96, 897-903. | 5.4 | 31 |
| 35 | Identification of Semiconductive Patches in Thermally Processed Monolayer Oxoâ€Functionalized Graphene. Angewandte Chemie - International Edition, 2020, 59, 13657-13662. | 7.2 | 31 |
| 36 | A facile approach to synthesize an oxo-functionalized graphene/polymer composite for low-voltage operating memory devices. Journal of Materials Chemistry C, 2015, 3, 8595-8604. | 2.7 | 30 |

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| 37 | High quality reduced graphene oxide flakes by fast kinetically controlled and clean indirect UV-induced radical reduction. Nanoscale, 2016, 8, 7572-7579. | 2.8 | 27 |
| 38 | Mechanistic insights into the reduction of graphene oxide addressing its surfaces. Physical Chemistry Chemical Physics, 2014, 16, 19832-19835. | 1.3 | 25 |
| 39 | Î³-Iron Phase Stabilized at Room Temperature by Thermally Processed Graphene Oxide. Journal of the American Chemical Society, 2018, 140, 9051-9055. | 6.6 | 24 |
| 40 | Diaminodicyanoquinones: Fluorescent Dyes with High Dipole Moments and Electronâ€Acceptor Properties. Angewandte Chemie - International Edition, 2019, 58, 8235-8239. | 7.2 | 22 |
| 41 | Region-Selective Self-Assembly of Functionalized Carbon Allotropes from Solution. ACS Nano, 2013, 7, 11427-11434. | 7.3 | 21 |
| 42 | Effect of the Structure and Morphology of Natural, Synthetic and Post-processed Graphites on Their Dispersibility and Electronic Properties. Fullerenes Nanotubes and Carbon Nanostructures, 2013, 21, 804-823. | 1.0 | 21 |
| 43 | Investigation of pentaarylazafullerenes as acceptor systems for bulk-heterojunction organic solar cells. Solar Energy Materials and Solar Cells, 2015, 132, 450-454. | 3.0 | 18 |
| 44 | Oxoâ€Functionalized Graphene: A Versatile Precursor for Alkylated Graphene Sheets by Reductive Functionalization. Chemistry - A European Journal, 2018, 24, 13348-13354. | 1.7 | 18 |
| 45 | Towards the Synthesis of Graphene Azide from Graphene Oxide. Molecules, 2015, 20, 21050-21057. | 1.7 | 15 |
| 46 | Emerging field of few-layered intercalated 2D materials. Nanoscale Advances, 2021, 3, 963-982. | 2.2 | 15 |
| 47 | Driving forces for the self-assembly of graphene oxide on organic monolayers. Nanoscale, 2014, 6, 11344-11350. | 2.8 | 14 |
| 48 | Design strategy of a graphene based bio-sensor for glucose. Carbon, 2018, 137, 343-348. | 5.4 | 14 |
| 49 | Voltage-reduced low-defect graphene oxide: a high conductivity, near-zero temperature coefficient of resistance material. Nanoscale, 2019, 11, 3112-3116. | 2.8 | 14 |
| 50 | Between Aromatic and Quinoid Structure: A Symmetrical UV to Vis/NIR Benzothiadiazole Redox Switch. Chemistry - A European Journal, 2020, 26, 17361-17365. | 1.7 | 14 |
| 51 | Scalable self-assembled reduced graphene oxide transistors on flexible substrate. Applied Physics Letters, 2014, 104, 243502. | 1.5 | 13 |
| 52 | Structural factors controlling size reduction of graphene oxide in liquid processing. Carbon, 2017, 125, 360-369. | 5.4 | 13 |
| 53 | Selective Functionalization of Graphene at Defectâ€Activated Sites by Arylazocarboxylic <i>tert</i>â€Butyl Esters. Angewandte Chemie - International Edition, 2019, 58, 3599-3603. | 7.2 | 13 |
| 54 | Influence of SiO<sub>2</sub> or h-BN substrate on the room-temperature electronic transport in chemically derived single layer graphene. RSC Advances, 2019, 9, 38011-38016. | 1.7 | 12 |

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| 55 | Polymerization in Carbone: A Novel Method for the Synthesis of More Sustainable Electrodes and Their Application as Cathodes for Lithiumâ€“Organic Energy Storage Materials Based On Vanillin. ACS Sustainable Chemistry and Engineering, 2020, 8, 3055-3064. | 3.2 | 12 |
| 56 | How fast is the reaction of hydrated electrons with graphene oxide in aqueous dispersions?. Nanoscale, 2015, 7, 19432-19437. | 2.8 | 11 |
| 57 | Molecular Lipid Films on Microengineering Materials. Langmuir, 2019, 35, 10286-10298. | 1.6 | 11 |
| 58 | Roomâ€Temperature Transport Properties of Graphene with Defects Derived from Oxoâ€Graphene. Chemistry - A European Journal, 2020, 26, 6484-6489. | 1.7 | 10 |
| 59 | Evidence for Electron Transfer between Graphene and Nonâ€Covalently Bound Ï€â€Systems. Chemistry - A European Journal, 2020, 26, 6694-6702. | 1.7 | 10 |
| 60 | Identification of the Irreversible Redox Behavior of Highly Fluorescent Benzothiadiazoles. ChemPhotoChem, 2020, 4, 668-673. | 1.5 | 9 |
| 61 | Wet-chemical synthesis of solution-processible porous graphene via defect-driven etching. Carbon, 2021, 185, 568-577. | 5.4 | 9 |
| 62 | Regiochemically Oxo-functionalized Graphene, Guided by Defect Sites, as Catalyst for Oxygen Reduction to Hydrogen Peroxide. Journal of Physical Chemistry Letters, 2021, 12, 10009-10014. | 2.1 | 9 |
| 63 | Thermische Disproportionierung von Oxoâ€funktionalisiertem Graphen. Angewandte Chemie, 2017, 129, 9350-9353. | 1.6 | 8 |
| 64 | Nahezu vollstÃndig intaktes und sauberes oxoâ€funktionalisiertes Graphen â€“ Synthese und elektronenstrahlinduzierte Reduktion. Angewandte Chemie, 2016, 128, 16003-16006. | 1.6 | 7 |
| 65 | A multiwavelength emission detector for analytical ultracentrifugation. Nanoscale Advances, 2019, 1, 4422-4432. | 2.2 | 6 |
| 66 | Fluorescence Quenching in J-Aggregates through the Formation of Unusual Metastable Dimers. Journal of Physical Chemistry B, 2021, 125, 4438-4446. | 1.2 | 6 |
| 67 | Interlayer electron modulation in van der Waals heterostructures assembled by stacking monolayer MoS<sub>2</sub> onto monolayer graphene with different electron transfer ability. Nanoscale, 2021, 13, 15464-15470. | 2.8 | 6 |
| 68 | Fluorescence of a chiral pentaphene derivative derived from the hexabenzocoronene Motif. Chemical Communications, 2019, 55, 10515-10518. | 2.2 | 5 |
| 69 | Controlled assembly of artificial 2D materials based on the transfer of oxo-functionalized graphene. Nanoscale Advances, 2020, 2, 176-181. | 2.2 | 5 |
| 70 | In situ functionalization of graphene. 2D Materials, 2021, 8, 015022. | 2.0 | 5 |
| 71 | Focused electron beam based direct-write fabrication of graphene and amorphous carbon from oxo-functionalized graphene on silicon dioxide. Physical Chemistry Chemical Physics, 2017, 19, 2683-2686. | 1.3 | 3 |
| 72 | Selektive Funktionalisierung von Graphen an defektaktivierten Bereichen durch ArylazocarbonsÃureâ€<i>tert</i>â€butylester. Angewandte Chemie, 2019, 131, 3637-3641. | 1.6 | 3 |

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| 73 | Potentiality of Graphene Oxide and Polyoxometalate as Radionuclides Adsorbent to Restore the Environment after Fukushima Disaster: A Mini Review. Indonesian Journal of Chemistry, 2021, 21, 776. | 0.3 | 3 |
| 74 | Synthesis of Wetâ€Chemically Prepared Porousâ€Graphene Single Layers on Si/SiO<sub>2</sub> Substrate Increasing the Photoluminescence of MoS<sub>2</sub> in Heterostructures. Advanced Materials Interfaces, 2021, 8, 2100783. | 1.9 | 3 |
| 75 | The importance of molecular structure and functionalization of oxo-graphene sheets for gene silencing. Carbon, 2022, , . | 5.4 | 3 |
| 76 | Graphene Synthesis. , 2016, , 19-61. | | 2 |
| 77 | Controlled Functionalization of Graphene by Oxo-addends. ChemistrySelect, 2017, 2, . | 0.7 | 2 |
| 78 | Diaminodicyanochinone â€“ Fluoreszenzfarbstoffe mit hohem Dipolmoment und Elektronenakzeptorâ€Eigenschaften. Angewandte Chemie, 2019, 131, 8321-8326. | 1.6 | 2 |
| 79 | Substitution Pattern-Controlled Fluorescence Lifetimes of Fluoranthene Dyes. Journal of Physical Chemistry B, 2021, 125, 1207-1213. | 1.2 | 2 |
| 80 | Ionâ€Induced Formation of Hierarchical Porous Nitrogenâ€Doped Carbon Materials with Enhanced Oxygen Reduction. ChemCatChem, 2021, 13, 3112-3118. | 1.8 | 2 |
| 81 | 2. Controlled Functionalization of Graphene by Oxo-addends. , 2017, , . | | 1 |
| 82 | Identifizierung von halbleitenden Bereichen in thermisch behandeltem monolagigem Oxoâ€funktionalisiertem Graphen. Angewandte Chemie, 2020, 132, 13760-13765. | 1.6 | 1 |
| 83 | Aggregation-induced emission leading to two distinct emissive species in the solid-state structure of high-dipole organic chromophores. Physical Chemistry Chemical Physics, 2021, 23, 17521-17529. | 1.3 | 1 |
| 84 | Graphene Oxide. , 2014, , 1-13. | | 1 |
| 85 | Transparent and Electrically Conductive Films from Chemically Derived Graphene. , 0, , . | | 1 |
| 86 | Influence of the coffee-ring effect and size of flakes of graphene oxide films on their electrochemical reduction. Physical Chemistry Chemical Physics, 2022, 24, 8076-8080. | 1.3 | 1 |
| 87 | Resolution of Intramolecular Dipoles and a Push-Back Effect of Individual Molecules on a Metal Surface. Journal of Physical Chemistry C, 2022, 126, 7667-7673. | 1.5 | 1 |
| 88 | FestkÃ¶rperchemie. Nachrichten Aus Der Chemie, 2016, 64, 246-254. | 0.0 | 0 |
| 89 | Hidden Defects and Unexpected Properties of Graphene â€" How Advanced TEM Contributes to Materials Development. Microscopy and Microanalysis, 2017, 23, 1752-1753. | 0.2 | 0 |
| 90 | Frontispiece: Brodie's or Hummersâ€™ Method: Oxidation Conditions Determine the Structure of Graphene Oxide. Chemistry - A European Journal, 2019, 25, . | 1.7 | 0 |

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| 91 | Synthesis of Wetâ€Chemically Prepared Porousâ€Graphene Single Layers on Si/SiO<sub>2</sub> Substrate Increasing the Photoluminescence of MoS<sub>2</sub> in Heterostructures (Adv. Mater. Interfaces) Tj ETQq1 1 0.784314 rgBT /Overlo | | |