# Marc T M Koper

List of Publications by Year
in descending order



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|---|---|---|---|
| 476 papers | 53,398 citations | 650 119 h-index | 1488 212 g-index |
| 503 all docs | 503 docs citations | 503 times ranked | 26116 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Advances and challenges in understanding the electrocatalytic conversion of carbon dioxide to fuels. Nature Energy, 2019, 4, 732-745. | 28.8 | 1,748 |
| 2 | Catalysts and Reaction Pathways for the Electrochemical Reduction of Carbon Dioxide. Journal of Physical Chemistry Letters, 2015, 6, 4073-4082. | 4.7 | 1,635 |
| 3 | Activating lattice oxygen redox reactions in metal oxides to catalyse oxygen evolution. Nature Chemistry, 2017, 9, 457-465. | 13.7 | 1,576 |
| 4 | Challenges in reduction of dinitrogen by proton and electron transfer. Chemical Society Reviews, 2014, 43, 5183-5191. | 39.0 | 1,306 |
| 5 | Nitrogen Cycle Electrocatalysis. Chemical Reviews, 2009, 109, 2209-2244. | 49.4 | 1,215 |
| 6 | Thermodynamic theory of multi-electron transfer reactions: Implications for electrocatalysis. Journal of Electroanalytical Chemistry, 2011, 660, 254-260. | 3.8 | 947 |
| 7 | Interfacial water reorganization as a pH-dependent descriptor of the hydrogen evolution rate on platinum electrodes. Nature Energy, 2017, 2, . | 28.8 | 862 |
| 8 | A new mechanism for the selectivity to C1 and C2 species in the electrochemical reduction of carbon dioxide on copper electrodes. Chemical Science, 2011, 2, 1902. | 7.5 | 795 |
| 9 | Two Pathways for the Formation of Ethylene in CO Reduction on Single-Crystal Copper Electrodes. Journal of the American Chemical Society, 2012, 134, 9864-9867. | 14.1 | 742 |
| 10 | Theoretical Considerations on the Electroreduction of CO to C<sub>2</sub> Species on Cu(100) Electrodes. Angewandte Chemie - International Edition, 2013, 52, 7282-7285. | 14.2 | 715 |
| 11 | Introducing structural sensitivity into adsorptionâ€“energy scaling relations by means of coordination numbers. Nature Chemistry, 2015, 7, 403-410. | 13.7 | 645 |
| 12 | Theory of multiple protonâ€“electron transfer reactions and its implications for electrocatalysis. Chemical Science, 2013, 4, 2710. | 7.5 | 640 |
| 13 | Electrocatalytic Nitrate Reduction for Sustainable Ammonia Production. Joule, 2021, 5, 290-294. | 24.0 | 640 |
| 14 | The stability number as a metric for electrocatalyst stability benchmarking. Nature Catalysis, 2018, 1, 508-515. | 27.4 | 605 |
| 15 | Electrocatalytic reduction of nitrate at low concentration on coinage and transition-metal electrodes in acid solutions. Journal of Electroanalytical Chemistry, 2003, 554-555, 15-23. | 3.8 | 549 |
| 16 | The importance of nickel oxyhydroxide deprotonation on its activity towards electrochemical water oxidation. Chemical Science, 2016, 7, 2639-2645. | 7.5 | 548 |
| 17 | In Situ Observation of Active Oxygen Species in Fe-Containing Ni-Based Oxygen Evolution Catalysts: The Effect of pH on Electrochemical Activity. Journal of the American Chemical Society, 2015, 137, 15112-15121. | 14.1 | 507 |
| 18 | Absence of CO2 electroreduction on copper, gold and silver electrodes without metal cations in solution. Nature Catalysis, 2021, 4, 654-662. | 27.4 | 501 |

| # | Article | IF | Citations |
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| 19 | Guidelines for the Rational Design of Ni-Based Double Hydroxide Electrocatalysts for the Oxygen Evolution Reaction. ACS Catalysis, 2015, 5, 5380-5387. | 11.3 | 488 |
| 20 | Powering denitrification: the perspectives of electrocatalytic nitrate reduction. Energy and Environmental Science, 2012, 5, 9726. | 31.3 | 484 |
| 21 | Electrocatalytic reduction of carbon dioxide to carbon monoxide and methane at an immobilized cobalt protoporphyrin. Nature Communications, 2015, 6, 8177. | 12.8 | 483 |
| 22 | The role of adsorbed hydroxide in hydrogen evolution reaction kinetics on modified platinum. Nature Energy, 2020, 5, 891-899. | 28.8 | 480 |
| 23 | Electrochemical CO<sub>2</sub> reduction on Cu<sub>2</sub>O-derived copper nanoparticles: controlling the catalytic selectivity of hydrocarbons. Physical Chemistry Chemical Physics, 2014, 16, 12194-12201. | 2.8 | 474 |
| 24 | Structure sensitivity and nanoscale effects in electrocatalysis. Nanoscale, 2011, 3, 2054. | 5.6 | 415 |
| 25 | Spectroscopic Observation of a Hydrogenated CO Dimer Intermediate During CO Reduction on Cu(100) Electrodes. Angewandte Chemie - International Edition, 2017, 56, 3621-3624. | 14.2 | 414 |
| 26 | Electrochemical CO<sub>2</sub> Reduction to Formic Acid at Low Overpotential and with High Faradaic Efficiency on Carbon-Supported Bimetallic Pdâ€“Pt Nanoparticles. ACS Catalysis, 2015, 5, 3916-3923. | 11.3 | 411 |
| 27 | Electrocatalytic Oxidation of Alcohols on Gold in Alkaline Media: Base or Gold Catalysis?. Journal of the American Chemical Society, 2011, 133, 6914-6917. | 14.1 | 383 |
| 28 | Iridium-based double perovskites for efficient water oxidation in acid media. Nature Communications, 2016, 7, 12363. | 12.8 | 381 |
| 29 | Manipulating the Hydrocarbon Selectivity of Copper Nanoparticles in CO<sub>2</sub> Electroreduction by Process Conditions. ChemElectroChem, 2015, 2, 354-358. | 3.4 | 378 |
| 30 | Competition between CO<sub>2</sub> Reduction and Hydrogen Evolution on a Gold Electrode under Well-Defined Mass Transport Conditions. Journal of the American Chemical Society, 2020, 142, 4154-4161. | 14.1 | 378 |
| 31 | Role of Crystalline Defects in Electrocatalysis:â€‰ Mechanism and Kinetics of CO Adlayer Oxidation on Stepped Platinum Electrodes. Journal of Physical Chemistry B, 2002, 106, 12938-12947. | 2.6 | 377 |
| 32 | Electrochemistry of Nanoparticles. Angewandte Chemie - International Edition, 2014, 53, 3558-3586. | 14.2 | 345 |
| 33 | The role of adsorbates in the electrochemical oxidation of ammonia on noble and transition metal electrodes. Journal of Electroanalytical Chemistry, 2001, 506, 127-137. | 3.8 | 339 |
| 34 | The influence of pH on the reduction of CO and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si29.gif" overflow="scroll"><mml:mrow><mml:msub><mml:mrow><mml:mtext>CO</mml:mtext></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math> to hydrocarbons on copper electrodes. Journal of Electroanalytical Chemistry, 2014, 716, 53-57. | 3.8 | 332 |
| 35 | Electrocatalytic reduction of Nitrate on Copper single crystals in acidic and alkaline solutions.. Electrochimica Acta, 2017, 227, 77-84. | 5.3 | 313 |
| 36 | Three-dimensional porous hollow fibre copper electrodes for efficient and high-rate electrochemical carbon dioxide reduction. Nature Communications, 2016, 7, 10748. | 12.8 | 311 |

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| 37 | Structure- and Potential-Dependent Cation Effects on CO Reduction at Copper Single-Crystal Electrodes. Journal of the American Chemical Society, 2017, 139, 16412-16419. | 14.1 | 309 |
| 38 | Competition between Hydrogen Evolution and Carbon Dioxide Reduction on Copper Electrodes in Mildly Acidic Media. Langmuir, 2017, 33, 9307-9313. | 3.6 | 302 |
| 39 | Structure Sensitivity of the Electrochemical Reduction of Carbon Monoxide on Copper Single Crystals. ACS Catalysis, 2013, 3, 1292-1295. | 11.3 | 297 |
| 40 | Number of outer electrons as descriptor for adsorption processes on transition metals and their oxides. Chemical Science, 2013, 4, 1245. | 7.5 | 291 |
| 41 | MnO<sub>x</sub>/IrO<sub>x</sub> as Selective Oxygen Evolution Electrocatalyst in Acidic Chloride Solution. Journal of the American Chemical Society, 2018, 140, 10270-10281. | 14.1 | 283 |
| 42 | Periodic Density Functional Study of CO and OH Adsorption on Ptâ˜Ru Alloy Surfaces:Â Implications for CO Tolerant Fuel Cell Catalysts. Journal of Physical Chemistry B, 2002, 106, 686-692. | 2.6 | 277 |
| 43 | Orientation-Dependent Oxygen Evolution on RuO<sub>2</sub> without Lattice Exchange. ACS Energy Letters, 2017, 2, 876-881. | 17.8 | 276 |
| 44 | Highly Selective Electro-Oxidation of Glycerol to Dihydroxyacetone on Platinum in the Presence of Bismuth. ACS Catalysis, 2012, 2, 759-764. | 11.3 | 275 |
| 45 | Structure Sensitivity of Methanol Electrooxidation Pathways on Platinum:Â An On-Line Electrochemical Mass Spectrometry Study. Journal of Physical Chemistry B, 2006, 110, 10021-10031. | 2.6 | 261 |
| 46 | Cooxidation on stepped Pt[n(111)Ã—(111)] electrodes. Journal of Electroanalytical Chemistry, 2000, 487, 37-44. | 3.8 | 260 |
| 47 | Mechanism of the Catalytic Oxidation of Glycerol on Polycrystalline Gold and Platinum Electrodes. ChemCatChem, 2011, 3, 1176-1185. | 3.7 | 259 |
| 48 | The promoting effect of adsorbed carbon monoxide on the oxidation of alcohols on a gold catalyst. Nature Chemistry, 2012, 4, 177-182. | 13.7 | 256 |
| 49 | Physical and Chemical Nature of the Scaling Relations between Adsorption Energies of Atoms on Metal Surfaces. Physical Review Letters, 2012, 108, 116103. | 7.8 | 248 |
| 50 | Electrocatalytic Conversion of Furanic Compounds. ACS Catalysis, 2016, 6, 6704-6717. | 11.3 | 246 |
| 51 | Electrochemical water splitting by gold: evidence for an oxide decomposition mechanism. Chemical Science, 2013, 4, 2334. | 7.5 | 239 |
| 52 | Coâ€adsorption of Cations as the Cause of the Apparent pH Dependence of Hydrogen Adsorption on a Stepped Platinum Singleâ€Crystal Electrode. Angewandte Chemie - International Edition, 2017, 56, 15025-15029. | 14.2 | 238 |
| 53 | Effects of electrolyte pH and composition on the ethanol electro-oxidation reaction. Catalysis Today, 2010, 154, 92-104. | 4.8 | 235 |
| 54 | Water at charged interfaces. Nature Reviews Chemistry, 2021, 5, 466-485. | 21.7 | 230 |

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| 55 | The influence of nitrate concentration and acidity on the electrocatalytic reduction of nitrate on platinum. Journal of Electroanalytical Chemistry, 2004, 562, 81-94. | 3.8 | 225 |
| 56 | Role of Crystalline Defects in Electrocatalysis:Â CO Adsorption and Oxidation on Stepped Platinum Electrodes As Studied by in situ Infrared Spectroscopy. Journal of Physical Chemistry B, 2002, 106, 9863-9872. | 2.6 | 223 |
| 57 | Importance of Acidâ€“Base Equilibrium in Electrocatalytic Oxidation of Formic Acid on Platinum. Journal of the American Chemical Society, 2013, 135, 9991-9994. | 14.1 | 223 |
| 58 | Enhancement of Oxygen Evolution Activity of Nickel Oxyhydroxide by Electrolyte Alkali Cations. Angewandte Chemie - International Edition, 2019, 58, 12999-13003. | 14.2 | 217 |
| 59 | A basic solution. Nature Chemistry, 2013, 5, 255-256. | 13.7 | 216 |
| 60 | Analysis of electrocatalytic reaction schemes: distinction between rate-determining and potential-determining steps. Journal of Solid State Electrochemistry, 2013, 17, 339-344. | 2.5 | 211 |
| 61 | Efficiency and selectivity of CO2 reduction to CO on gold gas diffusion electrodes in acidic media. Nature Communications, 2021, 12, 4943. | 12.8 | 211 |
| 62 | Tailoring the catalytic activity of electrodes with monolayer amounts of foreign metals. Chemical Society Reviews, 2013, 42, 5210. | 39.0 | 209 |
| 63 | In Situ Spectroscopic Study of CO<sub>2</sub> Electroreduction at Copper Electrodes in Acetonitrile. ACS Catalysis, 2016, 6, 2382-2392. | 11.3 | 209 |
| 64 | Theoretical Considerations on the Electroreduction of CO to C<sub>2</sub> Species on Cu(100) Electrodes. Angewandte Chemie, 2013, 125, 7423-7426. | 2.1 | 208 |
| 65 | Water dissociation on well-defined platinum surfaces: The electrochemical perspective. Catalysis Today, 2013, 202, 105-113. | 4.8 | 207 |
| 66 | Quantum-chemical calculations of CO and OH interacting with bimetallic surfaces. Electrochimica Acta, 2002, 47, 3621-3628. | 5.3 | 198 |
| 67 | Why Is Bulk Thermochemistry a Good Descriptor for the Electrocatalytic Activity of Transition Metal Oxides?. ACS Catalysis, 2015, 5, 869-873. | 11.3 | 196 |
| 68 | Suppression of Hydrogen Evolution in Acidic Electrolytes by Electrochemical CO<sub>2</sub> Reduction. Journal of the American Chemical Society, 2021, 143, 279-285. | 14.1 | 194 |
| 69 | Monte Carlo simulations of a simple model for the electrocatalytic CO oxidation on platinum. Journal of Chemical Physics, 1998, 109, 6051-6062. | 2.9 | 190 |
| 70 | Ethanol electro-oxidation on platinum in alkaline media. Physical Chemistry Chemical Physics, 2009, 11, 10446. | 2.8 | 190 |
| 71 | Intermediate stages of electrochemical oxidation of single-crystalline platinum revealed by in situ Raman spectroscopy. Nature Communications, 2016, 7, 12440. | 12.8 | 188 |
| 72 | First-principles computational electrochemistry: Achievements and challenges. Electrochimica Acta, 2012, 84, 3-11. | 5.3 | 187 |

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| 73 | A spongy nickel-organic CO <sub>2</sub> reduction photocatalyst for nearly 100% selective CO production. Science Advances, 2017, 3, e1700921. | 10.7 | 182 |
| 74 | On the importance of correcting for the uncompensated Ohmic resistance in model experiments of the Oxygen Reduction Reaction. Journal of Electroanalytical Chemistry, 2010, 647, 29-34. | 3.8 | 181 |
| 75 | Bond-Making and Breaking between Carbon, Nitrogen, and Oxygen in Electrocatalysis. Journal of the American Chemical Society, 2014, 136, 15694-15701. | 14.1 | 179 |
| 76 | Mechanism and kinetics of the electrochemical CO adlayer oxidation on Pt(111). Journal of Electroanalytical Chemistry, 2002, 524-525, 242-251. | 3.8 | 178 |
| 77 | Mechanistic classification of electrochemical oscillators â€" an operational experimental strategy. Journal of Electroanalytical Chemistry, 1999, 478, 50-66. | 3.8 | 177 |
| 78 | Combining Voltammetry with HPLC: Application to Electro-Oxidation of Glycerol. Analytical Chemistry, 2010, 82, 5420-5424. | 6.6 | 177 |
| 79 | DFT Study on the Mechanism of the Electrochemical Reduction of CO<sub>2</sub> Catalyzed by Cobalt Porphyrins. Journal of Physical Chemistry C, 2016, 120, 15714-15721. | 3.2 | 176 |
| 80 | The Role of Cation Acidity on the Competition between Hydrogen Evolution and CO<sub>2</sub> Reduction on Gold Electrodes. Journal of the American Chemical Society, 2022, 144, 1589-1602. | 14.1 | 176 |
| 81 | Controlling Catalytic Selectivities during CO<sub>2</sub> Electroreduction on Thin Cu Metal Overlayers. Journal of Physical Chemistry Letters, 2013, 4, 2410-2413. | 4.7 | 173 |
| 82 | Proton-coupled electron transfer in the electrocatalysis of CO<sub>2</sub> reduction: prediction of sequential vs. concerted pathways using DFT. Chemical Science, 2017, 8, 458-465. | 7.5 | 173 |
| 83 | Mechanism of the Dissociation and Electrooxidation of Ethanol and Acetaldehyde on Platinum As Studied by SERS. Journal of Physical Chemistry C, 2008, 112, 19080-19087. | 3.2 | 172 |
| 84 | Strong Impact of Platinum Surface Structure on Primary and Secondary Alcohol Oxidation during Electro-Oxidation of Glycerol. ACS Catalysis, 2016, 6, 4491-4500. | 11.3 | 172 |
| 85 | The Interrelated Effect of Cations and Electrolyte pH on the Hydrogen Evolution Reaction on Gold Electrodes in Alkaline Media. Angewandte Chemie - International Edition, 2021, 60, 13452-13462. | 14.2 | 172 |
| 86 | Ab Initio Calculations of Intermediates of Oxygen Reduction on Low-Index Platinum Surfaces. Journal of the Electrochemical Society, 2004, 151, A2016. | 2.9 | 171 |
| 87 | Field-dependent chemisorption of carbon monoxide and nitric oxide on platinum-group (111) surfaces: Quantum chemical calculations compared with infrared spectroscopy at electrochemical and vacuum-based interfaces. Journal of Chemical Physics, 2000, 113, 4392-4407. | 2.9 | 168 |
| 88 | Landing and Catalytic Characterization of Individual Nanoparticles on Electrode Surfaces. Journal of the American Chemical Society, 2012, 134, 18558-18561. | 14.1 | 164 |
| 89 | Interaction of H, O and OH with metal surfaces. Journal of Electroanalytical Chemistry, 1999, 472, 126-136. | 3.8 | 163 |
| 90 | Mechanisms of Carbon Monoxide and Methanol Oxidation at Single-crystal Electrodes. Topics in Catalysis, 2007, 46, 320-333. | 2.9 | 163 |

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| 91 | On-line mass spectrometry system for measurements at single-crystal electrodes in hanging meniscus configuration. Journal of Applied Electrochemistry, 2006, 36, 1215-1221. | 2.9 | 162 |
| 92 | Electro-oxidation of ethanol and acetaldehyde on platinum single-crystal electrodes. Faraday Discussions, 2008, 140, 399-416. | 3.6 | 162 |
| 93 | Mechanisms of electrochemical reduction and oxidation of nitric oxide. Electrochimica Acta, 2004, 49, 1307-1314. | 5.3 | 160 |
| 94 | Electrolyte Effects on CO<sub>2</sub> Electrochemical Reduction to CO. Accounts of Chemical Research, 2022, 55, 1900-1911. | 15.7 | 160 |
| 95 | Nitrate reduction on single-crystal platinum electrodes. Electrochimica Acta, 2005, 50, 4318-4326. | 5.3 | 159 |
| 96 | Mechanistic Study on the Electrocatalytic Reduction of Nitric Oxide on Transition-Metal Electrodes. Journal of Catalysis, 2001, 202, 387-394. | 6.4 | 158 |
| 97 | Lattice Gas Model for CO Electrooxidation on Ptâ^'Ru Bimetallic Surfaces. Journal of Physical Chemistry B, 1999, 103, 5522-5529. | 2.6 | 154 |
| 98 | Electrocatalytic oxidation of hydrazine on platinum electrodes in alkaline solutions. Electrochimica Acta, 2008, 53, 5199-5205. | 5.3 | 153 |
| 99 | Stripping voltammetry of carbon monoxide oxidation on stepped platinum single-crystal electrodes in alkaline solution. Physical Chemistry Chemical Physics, 2008, 10, 3802. | 2.8 | 152 |
| 100 | Cathodic Corrosion: A Quick, Clean, and Versatile Method for the Synthesis of Metallic Nanoparticles. Angewandte Chemie - International Edition, 2011, 50, 6346-6350. | 14.2 | 148 |
| 101 | Electrocatalysis on gold. Physical Chemistry Chemical Physics, 2014, 16, 13583-13594. | 2.8 | 148 |
| 102 | The Importance of Cannizzaro-Type Reactions during Electrocatalytic Reduction of Carbon Dioxide. Journal of the American Chemical Society, 2017, 139, 2030-2034. | 14.1 | 147 |
| 103 | Electrocatalytic oxidation of ammonia on Pt(111) and Pt(100) surfaces. Physical Chemistry Chemical Physics, 2006, 8, 2513. | 2.8 | 142 |
| 104 | Measurement of competition between oxygen evolution and chlorine evolution using rotating ring-disk electrode voltammetry. Journal of Electroanalytical Chemistry, 2018, 819, 260-268. | 3.8 | 142 |
| 105 | Electrochemical CO2 reduction to formic acid on a Pd-based formic acid oxidation catalyst. Catalysis Today, 2015, 244, 58-62. | 4.8 | 141 |
| 106 | Non-linear phenomena in electrochemical systems. Journal of the Chemical Society, Faraday Transactions, 1998, 94, 1369-1378. | 1.8 | 140 |
| 107 | Structure-sensitive electroreduction of acetaldehyde to ethanol on copper and its mechanistic implications for CO and CO 2 reduction. Catalysis Today, 2016, 262, 90-94. | 4.8 | 139 |
| 108 | Selectivity Trends Between Oxygen Evolution and Chlorine Evolution on Iridium-Based Double Perovskites in Acidic Media. ACS Catalysis, 2019, 9, 8561-8574. | 11.3 | 137 |

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| 109 | Structural and electronic effects in heterogeneous electrocatalysis: Toward a rational design of electrocatalysts. Journal of Catalysis, 2013, 308, 11-24. | 6.4 | 136 |
| 110 | Structure- and Coverage-Sensitive Mechanism of NO Reduction on Platinum Electrodes. ACS Catalysis, 2017, 7, 4660-4667. | 11.3 | 133 |
| 111 | Methanol Oxidation on Stepped Pt[n(111) Ã— (110)] Electrodes:Â A Chronoamperometric Study. Journal of Physical Chemistry B, 2003, 107, 8557-8567. | 2.6 | 132 |
| 112 | Promotion of the Oxidation of Carbon Monoxide at Stepped Platinum Single-Crystal Electrodes in Alkaline Media by Lithium and Beryllium Cations. Journal of the American Chemical Society, 2010, 132, 16127-16133. | 14.1 | 129 |
| 113 | Pseudo-Single-Crystal Electrochemistry on Polycrystalline Electrodes: Visualizing Activity at Grains and Grain Boundaries on Platinum for the Fe<sup>2+</sup>/Fe<sup>3+</sup> Redox Reaction. Journal of the American Chemical Society, 2013, 135, 3873-3880. | 14.1 | 128 |
| 114 | Oxygen reduction and evolution at single-metal active sites: Comparison between functionalized graphitic materials and protoporphyrins. Surface Science, 2013, 607, 47-53. | 2.0 | 126 |
| 115 | Selective Catalytic Reduction at Quasi-Perfect Pt(100) Domains: A Universal Low-Temperature Pathway from Nitrite to N<sub>2</sub>. Journal of the American Chemical Society, 2011, 133, 10928-10939. | 14.1 | 125 |
| 116 | Modeling the Oxygen Evolution Reaction on Metal Oxides: The Influence of Unrestricted DFT Calculations. Journal of Physical Chemistry C, 2014, 118, 4095-4102. | 3.2 | 125 |
| 117 | The effect of pH on the electrocatalytic oxidation of formic acid/formate on platinum: A mechanistic study by surface-enhanced infrared spectroscopy coupled with cyclic voltammetry. Electrochimica Acta, 2014, 129, 127-136. | 5.3 | 125 |
| 118 | Mechanistic study of the nitric oxide reduction on a polycrystalline platinum electrode. Electrochimica Acta, 2001, 46, 923-930. | 5.3 | 124 |
| 119 | Water electrolysis. Nature Reviews Methods Primers, 2022, 2, . | 18.3 | 124 |
| 120 | Oscillations and Complex Dynamical Bifurcations in Electrochemical Systems. Advances in Chemical Physics, 2007, , 161-298. | 0.0 | 123 |
| 121 | The theory of electrochemical instabilities. Electrochimica Acta, 1992, 37, 1771-1778. | 5.3 | 122 |
| 122 | Instabilities and oscillations in simple models of electrocatalytic surface reactions. Journal of Electroanalytical Chemistry, 1994, 371, 149-159. | 3.8 | 122 |
| 123 | Electrocatalytic Hydrogenation of 5â€Hydroxymethylfurfural in Acidic Solution. ChemSusChem, 2015, 8, 1745-1751. | 7.2 | 122 |
| 124 | Correlation of surface site formation to nanoisland growth in the electrochemical roughening of Pt(111). Nature Materials, 2018, 17, 277-282. | 25.8 | 122 |
| 125 | Stability study and categorization of electrochemical oscillators by impedance spectroscopy. Journal of Electroanalytical Chemistry, 1996, 409, 175-182. | 3.8 | 121 |
| 126 | Comparison of methanol, ethanol and iso-propanol oxidation on Pt and Pd electrodes in alkaline media studied by HPLC. Electrochemistry Communications, 2011, 13, 466-469. | 4.6 | 121 |

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| 127 | Electrolyte Effects on the Faradaic Efficiency of CO<sub>2</sub> Reduction to CO on a Gold Electrode. ACS Catalysis, 2021, 11, 4936-4945. | 11.3 | 121 |
| 128 | Understanding Cation Trends for Hydrogen Evolution on Platinum and Gold Electrodes in Alkaline Media. ACS Catalysis, 2021, 11, 14328-14335. | 11.3 | 119 |
| 129 | Electrocatalytic Hydrogenation of 5â€Hydroxymethylfurfural in the Absence and Presence of Glucose. ChemSusChem, 2013, 6, 1659-1667. | 7.2 | 118 |
| 130 | Bifurcations of mixed-mode oscillations in a three-variable autonomous Van der Pol-Duffing model with a cross-shaped phase diagram. Physica D: Nonlinear Phenomena, 1995, 80, 72-94. | 2.9 | 117 |
| 131 | Voltammetric Scanning Electrochemical Cell Microscopy: Dynamic Imaging of Hydrazine Electro-oxidation on Platinum Electrodes. Analytical Chemistry, 2015, 87, 5782-5789. | 6.6 | 116 |
| 132 | Spectroscopic Observation of a Hydrogenated CO Dimer Intermediate During CO Reduction on Cu(100) Electrodes. Angewandte Chemie, 2017, 129, 3675-3678. | 2.1 | 114 |
| 133 | Field-Dependent Electrodeâ^'Chemisorbate Bonding:Â Sensitivity of Vibrational Stark Effect and Binding Energetics to Nature of Surface Coordination. Journal of the American Chemical Society, 2002, 124, 2796-2805. | 14.1 | 113 |
| 134 | Adsorption of phosphate species on poly-oriented Pt and Pt(1 1 1) electrodes over a wide range of pH. Electrochimica Acta, 2010, 55, 7961-7968. | 5.3 | 112 |
| 135 | Iron-Based Perovskites for Catalyzing Oxygen Evolution Reaction. Journal of Physical Chemistry C, 2018, 122, 8445-8454. | 3.2 | 110 |
| 136 | Computational Comparison of Late Transition Metal (100) Surfaces for the Electrocatalytic Reduction of CO to C<sub>2</sub> Species. ACS Energy Letters, 2018, 3, 1062-1067. | 17.8 | 109 |
| 137 | Glycerol electro-oxidation on bismuth-modified platinum single crystals. Journal of Catalysis, 2017, 346, 117-124. | 6.4 | 108 |
| 138 | Theoretical design and experimental implementation of Ag/Au electrodes for the electrochemical reduction of nitrate. Physical Chemistry Chemical Physics, 2013, 15, 3196. | 2.8 | 107 |
| 139 | Electrocatalysis on bimetallic and alloy surfaces. Surface Science, 2004, 548, 1-3. | 2.0 | 105 |
| 140 | Electrochemical Reduction of NO by Hemin Adsorbed at Pyrolitic Graphite. Journal of the American Chemical Society, 2005, 127, 7579-7586. | 14.1 | 105 |
| 141 | pH dependence of the electroreduction of nitrate on Rh and Pt polycrystalline electrodes. Chemical Communications, 2014, 50, 2148-2151. | 4.1 | 105 |
| 142 | Modeling the butterfly: the voltammetry of (â^š3Ã—â^š3)R30Â° and p(2Ã—2) overlayers on (111) electrodes. Journal of Electroanalytical Chemistry, 2000, 485, 161-165. | 3.8 | 101 |
| 143 | Theory of the transition from sequential to concerted electrochemical protonâ€“electron transfer. Physical Chemistry Chemical Physics, 2013, 15, 1399-1407. | 2.8 | 101 |
| 144 | Oxidation of Formic Acid and Carbon Monoxide on Gold Electrodes Studied by Surface-Enhanced Raman Spectroscopy and DFT. ChemPhysChem, 2005, 6, 2597-2606. | 2.3 | 100 |

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| 145 | Carbon Monoxide Oxidation on Pt Single Crystal Electrodes: Understanding the Catalysis for Low Temperature Fuel Cells. ChemPhysChem, 2011, 12, 2064-2072. | 2.3 | 100 |
| 146 | Structural principles to steer the selectivity of the electrocatalytic reduction of aliphatic ketones on platinum. Nature Catalysis, 2019, 2, 243-250. | 27.4 | 100 |
| 147 | Effect of the Interfacial Water Structure on the Hydrogen Evolution Reaction on Pt(111) Modified with Different Nickel Hydroxide Coverages in Alkaline Media. ACS Applied Materials & Interfaces, 2019, 11, 613-623. | 8.1 | 99 |
| 148 | A lattice-gas model for halide adsorption on single-crystal electrodes. Journal of Electroanalytical Chemistry, 1998, 450, 189-201. | 3.8 | 98 |
| 149 | Electrochemical oscillators: their description through a mathematical model. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1991, 303, 73-94. | 0.3 | 96 |
| 150 | Potential Oscillations and S-Shaped Polarization Curve in the Continuous Electro-oxidation of CO on Platinum Single-crystal Electrodes. Journal of Physical Chemistry B, 2001, 105, 8381-8386. | 2.6 | 96 |
| 151 | Cathodic Corrosion as a Facile and Effective Method To Prepare Clean Metal Alloy Nanoparticles. Journal of the American Chemical Society, 2011, 133, 17626-17629. | 14.1 | 95 |
| 152 | Density functional theory study of the oxidation of CO by OH on Au(110) and Pt(111) surfaces. Physical Chemistry Chemical Physics, 2004, 6, 4215. | 2.8 | 91 |
| 153 | Double Layer at the Pt(111)â€“Aqueous Electrolyte Interface: Potential of Zero Charge and Anomalous Gouyâ€“Chapman Screening. Angewandte Chemie - International Edition, 2020, 59, 711-715. | 14.2 | 90 |
| 154 | A kinetic descriptor for the electrolyte effect on the oxygen reduction kinetics on Pt(111). Nature Catalysis, 2022, 5, 615-623. | 27.4 | 90 |
| 155 | Ab initio studies of a water layer at transition metal surfaces. Journal of Chemical Physics, 2005, 122, 054701. | 2.9 | 89 |
| 156 | Importance of Solvation for the Accurate Prediction of Oxygen Reduction Activities of Pt-Based Electrocatalysts. Journal of Physical Chemistry Letters, 2017, 8, 2243-2246. | 4.7 | 89 |
| 157 | Reduction of NO Adlayers on Pt(110) and Pt(111) in Acidic Media:Â Evidence for Adsorption Site-Specific Reduction. Langmuir, 2005, 21, 1448-1456. | 3.6 | 88 |
| 158 | Density functional theory study of adsorption of H2O, H, O, and OH on stepped platinum surfaces. Journal of Chemical Physics, 2014, 140, 134708. | 2.9 | 88 |
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