

Robert J Madix

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235
papers

9,140
citations

49
h-index

83
g-index

239
ext. papers

9,747
ext. citations

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avg, IF

6.16
L-index

| # | Paper | IF | Citations |
|-----|---|------|-----------|
| 235 | The selective oxidation of CH ₃ OH to H ₂ CO on a copper(110) catalyst. <i>Journal of Catalysis</i> , 1978 , 53, 208-227 | 2.7 | 465 |
| 234 | The oxidation of methanol on a silver (110) catalyst. <i>Surface Science</i> , 1978 , 76, 531-558 | 1.8 | 327 |
| 233 | Vibrational spectra of molecular and atomic oxygen on Ag(110). <i>Chemical Physics Letters</i> , 1980 , 76, 294-297 | | 246 |
| 232 | Adsorption of oxygen and hydrogen on Au(110)-(1 × 1). <i>Surface Science</i> , 1986 , 169, 347-356 | 1.8 | 219 |
| 231 | O Activation by Metal Surfaces: Implications for Bonding and Reactivity on Heterogeneous Catalysts. <i>Chemical Reviews</i> , 2018 , 118, 2816-2862 | 68.1 | 190 |
| 230 | Dynamic restructuring drives catalytic activity on nanoporous gold-silver alloy catalysts. <i>Nature Materials</i> , 2017 , 16, 558-564 | 27 | 180 |
| 229 | The adsorption and reaction of low molecular weight alkanes on metallic single crystal surfaces. <i>Surface Science Reports</i> , 2003 , 50, 107-199 | 12.9 | 172 |
| 228 | Selectivity control in gold-mediated esterification of methanol. <i>Angewandte Chemie - International Edition</i> , 2009 , 48, 4206-9 | 16.4 | 157 |
| 227 | Broensted basicity of atomic oxygen on the gold(110) surface: reactions with methanol, acetylene, water, and ethylene. <i>Journal of the American Chemical Society</i> , 1987 , 109, 1708-1714 | 16.4 | 157 |
| 226 | Molecular beam studies of gas-surface collision dynamics. <i>Progress in Surface Science</i> , 1991 , 38, 1-102 | 6.6 | 156 |
| 225 | Role of Defects in the Adsorption of Aliphatic Alcohols on the TiO ₂ (110) Surface. <i>Journal of Physical Chemistry B</i> , 2002 , 106, 10680-10692 | 3.4 | 149 |
| 224 | Reactive scattering from solid surfaces. <i>Surface Science Reports</i> , 1983 , 3, 413-495 | 12.9 | 141 |
| 223 | A vibrational study of formic acid interaction with clean and oxygen-covered silver (110) surfaces. <i>Surface Science</i> , 1981 , 105, 177-195 | 1.8 | 138 |
| 222 | The oxidation of ethanol on Cu(110) and Ag(110) catalysts. <i>Applications of Surface Science</i> , 1978 , 1, 303-328 | | 136 |
| 221 | Dissociative chemisorption of methane on Pt(111). <i>Surface Science</i> , 1989 , 215, 1-28 | 1.8 | 120 |
| 220 | Nanoporous Gold: Understanding the Origin of the Reactivity of a 21st Century Catalyst Made by Pre-Columbian Technology. <i>ACS Catalysis</i> , 2015 , 5, 6263-6270 | 13.1 | 118 |
| 219 | Surface-mediated self-coupling of ethanol on gold. <i>Journal of the American Chemical Society</i> , 2009 , 131, 5757-9 | 16.4 | 111 |

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| 218 | Unraveling molecular transformations on surfaces: a critical comparison of oxidation reactions on coinage metals. <i>Chemical Society Reviews</i> , 2008 , 37, 2243-61 | 58.5 | 108 |
| 217 | The oxidation of H ₂ CO on a copper(110) surface. <i>Surface Science</i> , 1979 , 84, 375-386 | 1.8 | 101 |
| 216 | The decomposition of formic acid on Ni(100). <i>Surface Science</i> , 1979 , 79, 394-412 | 1.8 | 101 |
| 215 | Identification of the intermediates in the dehydration of formic acid on Ni(110) by high resolution electron energy loss vibrational spectroscopy. <i>Surface Science</i> , 1983 , 125, 481-489 | 1.8 | 98 |
| 214 | Precursors and trapping in the molecular chemisorption of CO on Ni(100). <i>Surface Science</i> , 1987 , 180, 47-76 | 1.8 | 96 |
| 213 | Achieving optimum selectivity in oxygen assisted alcohol cross-coupling on gold. <i>Journal of the American Chemical Society</i> , 2010 , 132, 16571-80 | 16.4 | 94 |
| 212 | Different binding sites for methanol dehydrogenation and deoxygenation on stoichiometric and defective TiO ₂ (110) surfaces. <i>Surface Science</i> , 2003 , 544, 241-260 | 1.8 | 89 |
| 211 | Electronic structure and growth of vanadium on TiO ₂ (110). <i>Surface Science</i> , 2000 , 450, 12-26 | 1.8 | 89 |
| 210 | Trapping dynamics of xenon on Pt(111). <i>Surface Science</i> , 1990 , 226, 180-190 | 1.8 | 86 |
| 209 | The characterization of surface carbides of tungsten. <i>Journal of Catalysis</i> , 1978 , 54, 414-425 | 7.3 | 85 |
| 208 | Characterization of the Acid-Base Properties of the TiO ₂ (110) Surface by Adsorption of Amines. <i>Journal of Physical Chemistry B</i> , 2003 , 107, 3225-3233 | 3.4 | 81 |
| 207 | Low and high coverage determinations of the rate of carbon monoxide adsorption and desorption from Pt(110). <i>Journal of Chemical Physics</i> , 1980 , 73, 3480-3485 | 3.9 | 81 |
| 206 | Modulated beam relaxation spectrometry. <i>Surface Science</i> , 1974 , 46, 317-341 | 1.8 | 80 |
| 205 | Dynamics of molecular CH ₄ adsorption on Pt(111). <i>Surface Science</i> , 1989 , 222, 213-246 | 1.8 | 78 |
| 204 | Subsurface Hydrogen Diffusion into Pd Nanoparticles: Role of Low-Coordinated Surface Sites and Facilitation by Carbon. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 3539-3544 | 3.8 | 76 |
| 203 | Reaction Kinetics and Mechanism on Metal Single Crystal Surfaces. <i>Advances in Catalysis</i> , 1980 , 29, 1-53 | 2.4 | 76 |
| 202 | Chemical relaxation molecular beam studies of reactive gas-solid scattering. <i>Surface Science</i> , 1971 , 24, 264-287 | 1.8 | 76 |
| 201 | Epoxidation of olefins on silver: conversion of norbornene to norbornene oxide by atomic oxygen on silver(110). <i>Journal of the American Chemical Society</i> , 1988 , 110, 8540-8541 | 16.4 | 75 |

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| 200 | Preparation and reactions of V ₂ O ₅ supported on TiO ₂ (110). <i>Surface Science</i> , 2001 , 474, L213-L216 | 1.8 | 73 |
| 199 | Chemisorption of dioxygen on the Ag(110) surface. <i>Journal of Chemical Physics</i> , 1988 , 88, 3988-3995 | 3.9 | 70 |
| 198 | Ozone-Activated Nanoporous Gold: A Stable and Storable Material for Catalytic Oxidation. <i>ACS Catalysis</i> , 2015 , 5, 4237-4241 | 13.1 | 63 |
| 197 | Partial oxidation of methanol to formaldehyde on a model supported monolayer vanadia catalyst: vanadia on TiO ₂ (110). <i>Surface Science</i> , 2002 , 496, 51-63 | 1.8 | 63 |
| 196 | Stochastic simulations of the trapping of ethane on Pt(111) from a realistic potential: The roles of energy transfer processes and surface corrugation. <i>Journal of Chemical Physics</i> , 1996 , 104, 3134-3142 | 3.9 | 62 |
| 195 | Vibrational characterization of carbon monoxide adsorption on sulfur modified Ni(100) surfaces. <i>Surface Science</i> , 1984 , 143, 46-56 | 1.8 | 59 |
| 194 | Precious metal magic: catalytic wizardry. <i>Materials Today</i> , 2011 , 14, 134-142 | 21.8 | 57 |
| 193 | Vibrational spectroscopy of sulfur dioxide on the silver(110) surface: comparison to inorganic complexes. <i>Langmuir</i> , 1986 , 2, 406-411 | 4 | 57 |
| 192 | Highly selective acylation of dimethylamine mediated by oxygen atoms on metallic gold surfaces. <i>Angewandte Chemie - International Edition</i> , 2010 , 49, 394-8 | 16.4 | 56 |
| 191 | Oxygen-hydrogen and carbon-hydrogen bond activation in ethylene glycol by atomic oxygen on silver(110): heterometallacycle formation and selective dehydrogenation to glyoxal. <i>Journal of the American Chemical Society</i> , 1989 , 111, 3570-3577 | 16.4 | 55 |
| 190 | Oxygen-assisted cross-coupling of methanol with alkyl alcohols on metallic gold. <i>Chemical Science</i> , 2010 , 1, 310 | 9.4 | 53 |
| 189 | Van der Waals interactions determine selectivity in catalysis by metallic gold. <i>Journal of the American Chemical Society</i> , 2014 , 136, 13333-40 | 16.4 | 52 |
| 188 | Molecular propane adsorption dynamics on Pt(110)($\sqrt{1} \times \sqrt{1}$). <i>Surface Science</i> , 1993 , 297, 253-271 | 1.8 | 51 |
| 187 | Alkane dissociation dynamics on Pt(110)($\sqrt{1} \times \sqrt{1}$). <i>Journal of Chemical Physics</i> , 1993 , 98, 9963-9976 | 3.9 | 51 |
| 186 | Oxidation of tert-butyl alcohol to isobutylene oxide on a silver(110) surface: the role of unactivated carbon-hydrogen bonds in product selectivity. <i>Journal of the American Chemical Society</i> , 1989 , 111, 3826-3835 | 16.4 | 49 |
| 185 | Dynamics of Surface Alloys: Rearrangement of Pd/Ag(111) Induced by CO and O ₂ . <i>Journal of Physical Chemistry C</i> , 2019 , 123, 8312-8323 | 3.8 | 49 |
| 184 | Ethane dissociation dynamics on Pt(111). <i>Surface Science</i> , 1992 , 275, 265-280 | 1.8 | 48 |
| 183 | The reactivity of sulfur-containing molecules on noble metal surfaces. <i>Surface Science</i> , 1994 , 311, 159-171 | 1.8 | 47 |

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| 182 | Monitoring surface reactions with scanning tunneling microscopy: CO oxidation on p(2 × 1)-O pre-covered Cu(110) at 400 K. <i>Surface Science</i> , 1994 , 319, L34-L40 | 1.8 | 46 |
| 181 | Selective Oxygen-Assisted Reactions of Alcohols and Amines Catalyzed by Metallic Gold: Paradigms for the Design of Catalytic Processes. <i>ACS Catalysis</i> , 2017 , 7, 965-985 | 13.1 | 45 |
| 180 | Adsorbate-assisted adsorption: Trapping dynamics of Xe on Pt(111) at nonzero coverages. <i>Journal of Chemical Physics</i> , 1991 , 95, 5437-5443 | 3.9 | 45 |
| 179 | Molecular adsorption of alkanes on platinum surfaces: A predictive theoretical model. <i>Journal of Chemical Physics</i> , 1996 , 105, 1609-1620 | 3.9 | 44 |
| 178 | Predicting gold-mediated catalytic oxidative-coupling reactions from single crystal studies. <i>Accounts of Chemical Research</i> , 2014 , 47, 761-72 | 24.3 | 41 |
| 177 | An examination of adsorbed oxygen molecules on Ag(110) by UPS. <i>Chemical Physics Letters</i> , 1983 , 97, 85-88 | 2.5 | 41 |
| 176 | The effects of structured overlayers of sulfur on the kinetics and mechanism of simple reactions on Pt(111): I. Formaldehyde decomposition. <i>Applications of Surface Science</i> , 1981 , 7, 241-275 | | 41 |
| 175 | Hydrogen bonding on iron: correlation of adsorption and desorption states on Fe(100) and perturbation of the Fe-H bond with coadsorbed CO. <i>Surface Science</i> , 1996 , 347, 249-264 | 1.8 | 39 |
| 174 | The adsorption and reaction of simple molecules on metal surfaces. <i>Surface Science</i> , 1979 , 89, 540-553 | 1.8 | 38 |
| 173 | Exploiting basic principles to control the selectivity of the vapor phase catalytic oxidative cross-coupling of primary alcohols over nanoporous gold catalysts. <i>Journal of Catalysis</i> , 2015 , 329, 78-86 | 7.3 | 37 |
| 172 | Origin of the selectivity in the gold-mediated oxidation of benzyl alcohol. <i>Surface Science</i> , 2012 , 606, 1129-1134 | 1.8 | 37 |
| 171 | On the H ₂ /D ₂ exchange on stepped platinum surfaces. <i>Surface Science</i> , 1976 , 58, 590-596 | 1.8 | 37 |
| 170 | How Does Nanoporous Gold Dissociate Molecular Oxygen?. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 16636-16640 | 3.8 | 36 |
| 169 | Molecular adsorption and growth of n-butane adlayers on Pt(1 1 1). <i>Surface Science</i> , 2001 , 470, 226-242 | 1.8 | 36 |
| 168 | CO ₂ + O on Ag(110): Stoichiometry of Carbonate Formation, Reactivity of Carbonate with CO, and Reconstruction-Stabilized Chemisorption of CO ₂ . <i>Journal of Physical Chemistry B</i> , 2001 , 105, 3878-3885 | 3.4 | 36 |
| 167 | Carbon-carbon bond activation in the 1,2-ethanedioxy heterometallacycle by atomic oxygen on Ag(110). <i>Surface Science</i> , 1989 , 214, 276-288 | 1.8 | 36 |
| 166 | Achieving High Selectivity for Alkyne Hydrogenation at High Conversions with Compositionally Optimized PdAu Nanoparticle Catalysts in Raspberry Colloid-Templated SiO ₂ . <i>ACS Catalysis</i> , 2020 , 10, 441-450 | 13.1 | 36 |
| 165 | Noncovalent Bonding Controls Selectivity in Heterogeneous Catalysis: Coupling Reactions on Gold. <i>Journal of the American Chemical Society</i> , 2016 , 138, 15243-15250 | 16.4 | 35 |

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| 164 | Selectivity limitations in the heterogeneous epoxidation of olefins: branching reactions of the oxametallacycle intermediate in the partial oxidation of styrene. <i>Journal of the American Chemical Society</i> , 2006 , 128, 1034-5 | 16.4 | 35 |
| 163 | Partial oxidation of higher olefins on Ag(111): Conversion of styrene to styrene oxide, benzene, and benzoic acid. <i>Surface Science</i> , 2006 , 600, 5025-5040 | 1.8 | 35 |
| 162 | Active oxygen on Group VIII metals: activation of formic acid and formaldehyde on Pd(100). <i>Journal of the American Chemical Society</i> , 1988 , 110, 397-400 | 16.4 | 35 |
| 161 | Dry Dehydrogenation of Ethanol on PtAu Single Atom Alloys. <i>Topics in Catalysis</i> , 2018 , 61, 328-335 | 2.3 | 34 |
| 160 | Dilute Pd/Au Alloy Nanoparticles Embedded in Colloid-Templated Porous SiO ₂ : Stable Au-Based Oxidation Catalysts. <i>Chemistry of Materials</i> , 2019 , 31, 5759-5768 | 9.6 | 34 |
| 159 | The adsorption and reaction of Acetonitrile on clean and oxygen covered Ag(110) surfaces. <i>Surface Science</i> , 1986 , 175, 445-464 | 1.8 | 34 |
| 158 | Ag/Au mixed sites promote oxidative coupling of methanol on the alloy surface. <i>Chemistry - A European Journal</i> , 2014 , 20, 4646-52 | 4.8 | 33 |
| 157 | The adsorption of hydrogen sulfide on clean and sulfided Au(110). <i>Surface Science</i> , 1991 , 258, 359-375 | 1.8 | 33 |
| 156 | The adsorption dynamics of small alkanes on (111) surfaces of platinum group metals. <i>Surface Science</i> , 2004 , 557, 215-230 | 1.8 | 32 |
| 155 | Oxygen-Activated Combustion of Alkenes on the Pd(100) Surface. <i>Journal of the American Chemical Society</i> , 1995 , 117, 5523-5530 | 16.4 | 32 |
| 154 | Reactivity of Sulfur-Containing Molecules on Noble Metal Surfaces. 4. Benzenethiol on Au(110). <i>Journal of the American Chemical Society</i> , 1994 , 116, 3020-3027 | 16.4 | 32 |
| 153 | The desorption kinetics of water and formic acid from Ni(110) following low-temperature adsorption. <i>Journal of Catalysis</i> , 1978 , 51, 47-63 | 7.3 | 32 |
| 152 | Active sites for methanol partial oxidation on nanoporous gold catalysts. <i>Journal of Catalysis</i> , 2016 , 344, 778-783 | 7.3 | 32 |
| 151 | Cesium promotion in styrene epoxidation on silver catalysts. <i>Journal of the American Chemical Society</i> , 2010 , 132, 434-5 | 16.4 | 30 |
| 150 | Surface corrugation effects: molecular ethane adsorption dynamics on rigid adsorbate-covered surfaces of Pt(111). <i>Surface Science</i> , 1998 , 395, 148-167 | 1.8 | 30 |
| 149 | Adsorption and reaction of sulfur dioxide with Cu(110) and Cu(110)-p(2 \times 1)-O. <i>Journal of Chemical Physics</i> , 2002 , 116, 4698-4706 | 3.9 | 30 |
| 148 | The adsorption dynamics of molecular carbon dioxide on Pt() and Pd(). <i>Surface Science</i> , 2002 , 497, 356-372 | | 30 |
| 147 | Surface-mediated cycloaddition: 1,4-addition of atomically adsorbed oxygen to 1,3-butadiene on silver(110). <i>Journal of the American Chemical Society</i> , 1991 , 113, 9848-9851 | 16.4 | 30 |

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| 146 | The mechanism of acetate oxidation on Ag(110). <i>Surface Science</i> , 1986 , 172, 598-614 | 1.8 | 30 |
| 145 | The Adsorption Dynamics of Molecular Methane, Propane, and Neopentane on Pd(111): Theory and Experiment \square <i>Journal of Physical Chemistry B</i> , 2002 , 106, 8248-8257 | 3.4 | 29 |
| 144 | The kinetic isotope effect for C-H bond activation on Cu(110): the effects of tunnelling. <i>Surface Science</i> , 1992 , 277, 246-252 | 1.8 | 29 |
| 143 | Partial oxidation of hydrocarbons on silver: conversion of 1-butene to maleic anhydride by atomically adsorbed oxygen on Ag(110). <i>Surface Science</i> , 1991 , 253, 13-23 | 1.8 | 29 |
| 142 | Structure Sensitivity in the Partial Oxidation of Styrene, Styrene Oxide, and Phenylacetaldehyde on Silver Single Crystals. <i>Journal of Physical Chemistry C</i> , 2007 , 111, 3675-3679 | 3.8 | 28 |
| 141 | Reactivity of Stoichiometric and Defective TiO ₂ (110) Surfaces toward DCOOD Decomposition. <i>Journal of Physical Chemistry B</i> , 2003 , 107, 11709-11720 | 3.4 | 28 |
| 140 | Activated metallic gold as an agent for direct methoxycarbonylation. <i>Journal of the American Chemical Society</i> , 2011 , 133, 20378-83 | 16.4 | 27 |
| 139 | Real-time observation of surface reactivity and mobility with scanning tunneling microscopy. <i>Accounts of Chemical Research</i> , 2003 , 36, 471-80 | 24.3 | 27 |
| 138 | The growth of vanadium oxide on alumina and titania single crystal surfaces. <i>Faraday Discussions</i> , 1999 , 114, 67-84 | 3.6 | 27 |
| 137 | Monolayer structure of phenoxy species on Cu(110): an STM study. <i>Surface Science</i> , 1995 , 341, L1065-L1078 | 1.8 | 27 |
| 136 | Enhanced stability of t-butanol reaction intermediates on oxygen covered Cu(110): Cleavage of unactivated C-H bonds on metal surfaces. <i>Surface Science</i> , 1989 , 214, 396-406 | 1.8 | 27 |
| 135 | Surface explosion: HCOOH on Ni <110>. <i>Surface Science</i> , 1974 , 42, 329-330 | 1.8 | 27 |
| 134 | Surface microstructure effects: molecular ethane adsorption dynamics on Pt(110)-(1 \times 1). <i>Surface Science</i> , 1996 , 365, 683-700 | 1.8 | 26 |
| 133 | Surface Structure Dependence of the Dry Dehydrogenation of Alcohols on Cu(111) and Cu(110). <i>Journal of Physical Chemistry C</i> , 2017 , 121, 12800-12806 | 3.8 | 25 |
| 132 | Direct dissociative chemisorption of alkanes on Pt(111): Influence of molecular complexity. <i>Journal of Chemical Physics</i> , 2000 , 112, 396-407 | 3.9 | 25 |
| 131 | Atom-resolved investigation of surface reactions: ammonia and oxygen on Cu(110) at 300 and 400 K. <i>Faraday Discussions</i> , 1996 , 105, 139 | 3.6 | 25 |
| 130 | Hydrogenation of Weakly Rehybridized Ethylene on Fe(100) \square : Ethyl Group Formation. <i>Journal of the American Chemical Society</i> , 1996 , 118, 5062-5067 | 16.4 | 25 |
| 129 | Crossing the great divide between single-crystal reactivity and actual catalyst selectivity with pressure transients. <i>Nature Catalysis</i> , 2018 , 1, 852-859 | 36.5 | 25 |

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| 128 | Mesoscopic restructuring and mass transport of metal atoms during reduction of the Ag(111)-p(4x4)-O surface with CO. <i>Journal of Chemical Physics</i> , 2007 , 126, 084707 | 3.9 | 24 |
| 127 | Reactivity of methanol on TiO ₂ nanoparticles supported on the Au(1 1 1) surface. <i>Surface Science</i> , 2005 , 591, 1-12 | 1.8 | 24 |
| 126 | Oxidation of tert-butyl alcohol to isobutylene oxide: rate-limiting carbon-hydrogen activation by a Ag(110) surface. <i>Journal of the American Chemical Society</i> , 1987 , 109, 8082-8083 | 16.4 | 24 |
| 125 | Continuous Catalytic Production of Methyl Acrylates from Unsaturated Alcohols by Gold: The Strong Effect of C=C Unsaturation on Reaction Selectivity. <i>ACS Catalysis</i> , 2016 , 6, 1833-1839 | 13.1 | 23 |
| 124 | A variable temperature scanning tunneling microscope for the study of surface reactions in ultrahigh vacuum. <i>Review of Scientific Instruments</i> , 1995 , 66, 4552-4556 | 1.7 | 23 |
| 123 | The dynamics of precursor adsorption: ethane on Pt(111). <i>Surface Science</i> , 1990 , 237, L424-L431 | 1.8 | 23 |
| 122 | The dynamical origin of non-normal energy scaling and the effect of surface temperature on the trapping of low molecular weight alkanes on Pt(111). <i>Surface Science</i> , 1997 , 380, 489-496 | 1.8 | 22 |
| 121 | Competitive Reactions of Atomic Oxygen with Acetone on Ag(110): Nucleophilicity Versus Basicity. <i>Journal of the American Chemical Society</i> , 1995 , 117, 2301-2312 | 16.4 | 22 |
| 120 | Site blocking by hydrogen: CO on clean and H-presaturated Fe(100). <i>Surface Science</i> , 1992 , 271, 81-84 | 1.8 | 22 |
| 119 | Reactions of weak organic acids with oxygen atoms on Ag(100): Facile and selective conversion of cyclohexene to benzene. <i>Surface Science</i> , 1990 , 226, L71-L78 | 1.8 | 22 |
| 118 | The kinetics and mechanism of catalytic reactions by molecular beam relaxation spectroscopy: HCOOH decomposition. <i>Surface Science</i> , 1977 , 65, 287-313 | 1.8 | 22 |
| 117 | Alkane activation via precursor-mediated dissociation on Ir(110). <i>Surface Science</i> , 1995 , 323, 1-5 | 1.8 | 21 |
| 116 | Oxidative coupling and ring opening of furan on silver(110): formation of maleic anhydride, benzene, and bifuran. <i>Journal of the American Chemical Society</i> , 1993 , 115, 729-736 | 16.4 | 21 |
| 115 | Reactivity of Sulfur-Containing Molecules on Noble Metal Surfaces. 2. tert-Butyl Thioalcohol on Au(110). <i>Journal of the American Chemical Society</i> , 1994 , 116, 3012-3019 | 16.4 | 21 |
| 114 | Allyl, and trimethylenemethane complexes derived from isobutylene adsorption on oxygen-activated Ag(110). <i>Surface Science</i> , 1992 , 262, 51-67 | 1.8 | 21 |
| 113 | Chemical relaxation molecular beam studies of reactive gas-solid scattering. <i>Surface Science</i> , 1971 , 24, 288-301 | 1.8 | 21 |
| 112 | Oxidation of Styrene and Phenylacetaldehyde on Ag(111): Evidence for Transformation of Surface Oxametallacycle. <i>Journal of Physical Chemistry C</i> , 2008 , 112, 4725-4734 | 3.8 | 20 |
| 111 | Trapping dynamics of isobutane, n-butane, and neopentane on Pt(111): Effects of molecular weight and structure. <i>Journal of Chemical Physics</i> , 1999 , 110, 10585-10598 | 3.9 | 20 |

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| 110 | Surface corrugation effects on the adsorption dynamics of xenon on Pt(110)(1 × 1). <i>Surface Science</i> , 1993 , 297, L148-L155 | 1.8 | 20 |
| 109 | The effect of site distribution on desorption kinetics: carbon monoxide from Ni(100). <i>Surface Science</i> , 1994 , 301, 83-88 | 1.8 | 20 |
| 108 | Enhancing catalytic performance of dilute metal alloy nanomaterials. <i>Communications Chemistry</i> , 2020 , 3, | 6.3 | 20 |
| 107 | Active site densities, oxygen activation and adsorbed reactive oxygen in alcohol activation on npAu catalysts. <i>Faraday Discussions</i> , 2016 , 188, 57-67 | 3.6 | 19 |
| 106 | Dual-function of alcohols in gold-mediated selective coupling of amines and alcohols. <i>Chemistry - A European Journal</i> , 2012 , 18, 2313-8 | 4.8 | 19 |
| 105 | Alkene and Arene Combustion on Pd(111). <i>Journal of Catalysis</i> , 1998 , 178, 520-532 | 7.3 | 19 |
| 104 | Anomalous effects of weak chemisorption on desorption kinetics of alkenes: The desorption of propylene and propane from Ag(110). <i>Journal of Chemical Physics</i> , 1996 , 104, 1699-1708 | 3.9 | 19 |
| 103 | Site-specific reactivity of oxygen at Cu(110) step defects: an STM study of ammonia dehydrogenation. <i>Surface Science</i> , 1996 , 367, L95-L101 | 1.8 | 19 |
| 102 | Kinetic isotope effect in direct ethane dissociation on Pt(111). <i>Surface Science</i> , 1993 , 294, 420-428 | 1.8 | 19 |
| 101 | The adsorption and reaction of 1,2-propanediol on Ag(110) under oxygen lean conditions. <i>Surface Science</i> , 1994 , 303, 279-296 | 1.8 | 19 |
| 100 | C-C and C-H bond activation of 1,2-propanedioxy by atomic oxygen on Ag(110): Effects of CO-adsorbed oxygen on reaction mechanism. <i>Surface Science</i> , 1994 , 303, 297-311 | 1.8 | 19 |
| 99 | Kinetics of hydroxyl recombination on clean and oxygen-covered silver(110). <i>Langmuir</i> , 1985 , 1, 526-528 | 4 | 19 |
| 98 | Determination of adsorbate coverages by leed and XPS. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 1980 , 20, 281-287 | 1.7 | 19 |
| 97 | New Architectures for Designed Catalysts: Selective Oxidation using AgAu Nanoparticles on Colloid-Templated Silica. <i>Chemistry - A European Journal</i> , 2018 , 24, 1833-1837 | 4.8 | 18 |
| 96 | Self-assembly of acetate adsorbates drives atomic rearrangement on the Au(110) surface. <i>Nature Communications</i> , 2016 , 7, 13139 | 17.4 | 18 |
| 95 | Evolution of steady-state material properties during catalysis: Oxidative coupling of methanol over nanoporous Ag _{0.03} Au _{0.97} . <i>Journal of Catalysis</i> , 2019 , 380, 366-374 | 7.3 | 18 |
| 94 | Tuning the Stability of Surface Intermediates Using Adsorbed Oxygen: Acetate on Au(111). <i>Journal of Physical Chemistry Letters</i> , 2014 , 5, 1126-30 | 6.4 | 18 |
| 93 | Butyrophenone on O-TiO ₂ (110): one-dimensional motion in a weakly confined potential well. <i>ACS Nano</i> , 2012 , 6, 2925-30 | 16.7 | 18 |

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| 92 | A paradigm for predicting selective oxidation on noble metals: oxidative catalytic coupling of amines and aldehydes on metallic gold. <i>Faraday Discussions</i> , 2011 , 152, 241-52; discussion 293-306 | 3.6 | 18 |
| 91 | Topographic nano-restructuring: sulfur dioxide adsorption on Cu(110). <i>Surface Science</i> , 2003 , 524, L84-L888 | | 18 |
| 90 | Imaging Surface Reactions at Atomic Resolution: A Wealth of Behavior on the Nanoscale. <i>Journal of Physical Chemistry B</i> , 2003 , 107, 3105-3116 | 3.4 | 18 |
| 89 | Reaction of sulfur dioxide with Ag(110) $\sqrt{2}\sqrt{2}$ -O: a LEED, TPRS, and STM investigation. <i>Surface Science</i> , 2002 , 504, 223-234 | 1.8 | 18 |
| 88 | Hydrogen migration at restructuring palladium-silver oxide boundaries dramatically enhances reduction rate of silver oxide. <i>Nature Communications</i> , 2020 , 11, 1844 | 17.4 | 18 |
| 87 | Methyl ester synthesis catalyzed by nanoporous gold: from 10 ⁹ Torr to 1 atm. <i>Catalysis Science and Technology</i> , 2015 , 5, 1299-1306 | 5.5 | 17 |
| 86 | Direct collisionally activated and trapping-mediated dissociative chemisorption of neopentane on clean Pt(111): the activity of surface defect sites. <i>Surface Science</i> , 1997 , 393, 150-161 | 1.8 | 17 |
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