

Pedro L De Andres

List of Publications by Year in descending order

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104
papers

3,171
citations

147801

31
h-index

161849

54
g-index

104
all docs

104
docs citations

104
times ranked

3352
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Monitoring and Forecasting COVID-19: Heuristic Regression, Susceptible-Infected-Removed Model and, Spatial Stochastic. <i>Frontiers in Applied Mathematics and Statistics</i> , 2021, 7, 650716. | 1.3 | 6 |
| 2 | Metal-catalyst-free gas-phase synthesis of long-chain hydrocarbons. <i>Nature Communications</i> , 2021, 12, 5937. | 12.8 | 7 |
| 3 | Effects of Li Confined Motion on NMR Quadrupolar Interactions: A Combined ^7Li NMR and DFT-DM Study of $\text{LiR}_2(\text{PO}_4)_3$ (R=Ti or Zr) Phases. <i>ChemSusChem</i> , 2020, 13, 1027-1036. | 6.8 | 4 |
| 4 | On-Surface Driven Formal Michael Addition Produces m -Polyaniline Oligomers on Pt(111). <i>Angewandte Chemie - International Edition</i> , 2020, 59, 23220-23227. | 13.8 | 5 |
| 5 | On-Surface Driven Formal Michael Addition Produces m -Polyaniline Oligomers on Pt(111). <i>Angewandte Chemie</i> , 2020, 132, 23420-23427. | 2.0 | 1 |
| 6 | Diffusion and trapping of hydrogen in carbon steel at different temperatures. <i>Theoretical and Applied Fracture Mechanics</i> , 2020, 110, 102803. | 4.7 | 10 |
| 7 | Macroscopic Versus Microscopic Schottky Barrier Determination at (Au/Pt)/Ge(100): Interfacial Local Modulation. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 28894-28902. | 8.0 | 4 |
| 8 | Hydrogen in δ -iron: role of phonons in the diffusion of interstitials at high temperature. <i>Scientific Reports</i> , 2019, 9, 12127. | 3.3 | 5 |
| 9 | On-Surface Hydrogen-Induced Covalent Coupling of Polycyclic Aromatic Hydrocarbons via a Superhydrogenated Intermediate. <i>Journal of the American Chemical Society</i> , 2019, 141, 3550-3557. | 13.7 | 40 |
| 10 | Density Functional Theory Modeling of Solid-State Nuclear Magnetic Resonances for Polycyclic Aromatic Hydrocarbons. <i>Journal of Physical Chemistry C</i> , 2018, 122, 11008-11014. | 3.1 | 0 |
| 11 | How Au Outperforms Pt in the Catalytic Reduction of Methane Towards Ethane and Molecular Hydrogen. <i>Topics in Catalysis</i> , 2018, 61, 1290-1299. | 2.8 | 0 |
| 12 | On-Surface Bottom-Up Synthesis of Azine Derivatives Displaying Strong Acceptor Behavior. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 8582-8586. | 13.8 | 13 |
| 13 | Electron transport in ultra-thin films and ballistic electron emission microscopy. <i>Journal of Physics Condensed Matter</i> , 2017, 29, 115001. | 1.8 | 3 |
| 14 | Cálculo de la velocidad de propagación de la fisura debido a fragilización por hidrógeno. <i>Hormigon Y Acero</i> , 2016, 67, 325-332. | 0.2 | 4 |
| 15 | Rotation assisted diffusion of water trimers on Pd{111}. <i>Surface Science</i> , 2016, 648, 256-261. | 1.9 | 1 |
| 16 | Graphene growth on Pt(111) and Au(111) using a MBE carbon solid-source. <i>Diamond and Related Materials</i> , 2015, 57, 58-62. | 3.9 | 27 |
| 17 | Ortho and Para Hydrogen Dimers on C/SiC(0001): Combined STM and DFT Study. <i>Langmuir</i> , 2015, 31, 233-239. | 3.5 | 12 |
| 18 | One-dimensional potential for image-potential states on graphene. <i>New Journal of Physics</i> , 2014, 16, 023012. | 2.9 | 13 |

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|----|---|-----|-----------|
| 19 | Etching of Graphene in a Hydrogen-rich Atmosphere toward the Formation of Hydrocarbons in Circumstellar Clouds. <i>Journal of Physical Chemistry C</i> , 2014, 118, 26882-26886. | 3.1 | 9 |
| 20 | Valence band electronic structure characterization of the rutile TiO ₂ (110)-(1 $\bar{1}$ –2) reconstructed surface. <i>Surface Science</i> , 2013, 608, 92-96. | 1.9 | 19 |
| 21 | Role of the Anchored Groups in the Bonding and Self-Organization of Macrocycles: Carboxylic versus Pyrrole Groups. <i>Journal of Physical Chemistry C</i> , 2013, 117, 7661-7668. | 3.1 | 8 |
| 22 | Diffusion of Hydrogen in Pd Assisted by Inelastic Ballistic Hot Electrons. <i>Physical Review Letters</i> , 2012, 108, 115902. | 7.8 | 19 |
| 23 | Spin alignment of extra electrons in K-phenanthrene clusters taken from the crystalline tripotassium-intercalated phenanthrene structure. <i>Physical Review B</i> , 2012, 85, . | 3.2 | 8 |
| 24 | Bending modes, anharmonic effects, and thermal expansion coefficient in single-layer and multilayer graphene. <i>Physical Review B</i> , 2012, 86, . | 3.2 | 99 |
| 25 | Weakly Interacting Molecular Layer of Spinning C ₆₀ Molecules on TiO ₂ (110) Surfaces. <i>Chemistry - A European Journal</i> , 2012, 18, 7382-7387. | 3.3 | 26 |
| 26 | <i>Ab initio</i> study of the cubic-to-hexagonal phase transition promoted by interstitial hydrogen in iron. <i>Physical Review B</i> , 2011, 84, . | 3.2 | 15 |
| 27 | <i>Ab initio</i> electronic and geometrical structures of tripotassium-intercalated phenanthrene. <i>Physical Review B</i> , 2011, 84, . | 3.2 | 34 |
| 28 | Crystal structure and electronic states of tripotassium picene. <i>Physical Review B</i> , 2011, 83, . | 3.2 | 45 |
| 29 | Understanding atomic-resolved STM images on TiO ₂ (110)-(1 $\bar{1}$ –1) surface by DFT calculations. <i>Nanotechnology</i> , 2010, 21, 405702. | 2.6 | 33 |
| 30 | Trapping of electrons near chemisorbed hydrogen on graphene. <i>Physical Review B</i> , 2010, 81, . | 3.2 | 18 |
| 31 | Hydrogen on graphene under stress: Molecular dissociation and gap opening. <i>Physical Review B</i> , 2010, 81, . | 3.2 | 77 |
| 32 | Interplay between Fast Diffusion and Molecular Interaction in the Formation of Self-Assembled Nanostructures of S-Cysteine on Au(111). <i>Langmuir</i> , 2010, 26, 4113-4118. | 3.5 | 38 |
| 33 | <i>Ab initio</i> molecular dynamics simulation of hydrogen diffusion in $\sqrt{3}\times\sqrt{3}$ -iron. <i>Physical Review B</i> , 2010, 81, . | 3.2 | 46 |
| 34 | Ordered Vacancy Network Induced by the Growth of Epitaxial Graphene on Pt(111). <i>Physical Review Letters</i> , 2010, 105, 216102. | 7.8 | 70 |
| 35 | Characterization of thin silicon overlayers on rutile TiO ₂ . <i>Physical Review B</i> , 2010, 82, . | 3.2 | 22 |
| 36 | Crystal structure and charge-transport properties of N-trimethyltriindole: Novel p-type organic semiconductor single crystals. <i>Organic Electronics</i> , 2009, 10, 643-652. | 2.6 | 56 |

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|----|---|-----|-----------|
| 37 | Hydrogen in $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \langle \text{mml:mi} \rangle \hat{\pm} \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ -iron: Stress and diffusion. Physical Review B, 2008, 78, . | 3.2 | 67 |
| 38 | Strong covalent bonding between two graphene layers. Physical Review B, 2008, 77, . | 3.2 | 147 |
| 39 | First-principles calculation of the effect of stress on the chemical activity of graphene. Applied Physics Letters, 2008, 93, . | 3.3 | 50 |
| 40 | Quantitative LEED analysis using a simultaneous optimization algorithm. Journal of Physics Condensed Matter, 2008, 20, 304201. | 1.8 | 3 |
| 41 | LEED-IV study of the rutile $\text{TiO}_2(110)\hat{\sim}1\text{\AA}-2$ surface with a Ti-interstitial added-row reconstruction. Physical Review B, 2007, 75, . | 3.2 | 27 |
| 42 | Multiscale modeling of Schottky-barrier MOSFETs with disilicide source/drain contacts: Role of contacts in the carrier injection. Physical Review B, 2007, 76, . | 3.2 | 6 |
| 43 | Structure of Rutile $\text{TiO}_2(110)\hat{\sim}(1\text{\AA}-2)$: Formation of Ti_2O_3 Quasi-1D Metallic Chains. Physical Review Letters, 2006, 96, 055502. | 7.8 | 60 |
| 44 | Surface diffraction structure determination from combinatorial simultaneous optimization. Surface Science, 2006, 600, L91-L95. | 1.9 | 6 |
| 45 | A molecular T-matrix approach to calculating Low-Energy Electron Diffraction intensities for ordered molecular adsorbates. Surface Science, 2005, 579, 89-99. | 1.9 | 20 |
| 46 | Surface atomic structure determination of three-dimensional yttrium silicide epitaxially grown on Si(111). Physical Review B, 2005, 71, . | 3.2 | 14 |
| 47 | A FORTRAN-90 Low-Energy Electron Diffraction program (LEED90 v1.1). Computer Physics Communications, 2004, 161, 151-165. | 7.5 | 3 |
| 48 | Molecular t-matrices for Low-Energy Electron Diffraction (TMOL v1.1). Computer Physics Communications, 2004, 161, 166-178. | 7.5 | 3 |
| 49 | First-principles study of H_2O diffusion on a metal surface: $\hat{\sim}f\text{H}_2\text{O}$ on $\text{Al}\{100\}$. Physical Review B, 2004, 69, . | 3.2 | 39 |
| 50 | Density functional theory study of the interaction of monomeric water with the $\text{Ag}\{111\}$ surface. Physical Review B, 2004, 69, . | 3.2 | 53 |
| 51 | Water Dimer Diffusion on $\text{Pd}\{111\}$ Assisted by an H-Bond Donor-Acceptor Tunneling Exchange. Physical Review Letters, 2004, 92, 136104. | 7.8 | 114 |
| 52 | General Model for Water Monomer Adsorption on Close-Packed Transition and Noble Metal Surfaces. Physical Review Letters, 2003, 90, 216102. | 7.8 | 358 |
| 53 | Patterson function from low-energy electron diffraction measured intensities and structural discrimination. Physical Review B, 2003, 67, . | 3.2 | 7 |
| 54 | Hot-electron lifetimes in metals: $\hat{\sim}fA$ combined ab initio calculation and ballistic electron emission spectroscopy analysis. Physical Review B, 2003, 68, . | 3.2 | 29 |

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|----|---|-----|-----------|
| 55 | Electronic transport on Au/Si structures: Electron-electron, electron-phonon, and band structure effects. <i>Physical Review B</i> , 2002, 66, . | 3.2 | 8 |
| 56 | Structural determination of two-dimensional YSi_2 epitaxially grown on Si(111). <i>Physical Review B</i> , 2002, 66, . | 3.2 | 26 |
| 57 | A comparison between BEEM currents on Au/Si(1 1 1) and Au/Si(1 0 0): inelastic and geometrical effects. <i>Surface Science</i> , 2001, 482-485, 430-436. | 1.9 | 5 |
| 58 | Structural and compositional reversible phase transitions on low-index Fe ₃ Si surfaces. <i>Europhysics Letters</i> , 2001, 56, 822-828. | 2.0 | 28 |
| 59 | Theory of ballistic electron emission microscopy. <i>Progress in Surface Science</i> , 2001, 66, 3-51. | 8.3 | 43 |
| 60 | Anisotropic and anharmonic effects through the t-matrix for Low-Energy Electron Diffraction (TMAT) Tj ETQq 0 0 rgBT /Overlock 10 TF 5 | 7.5 | 8 |
| 61 | Surface and bulk band-structure effects on $\text{CoSi}_2/\text{Si}(111)$ ballistic-electron emission experiments. <i>Physical Review B</i> , 2001, 63, . | 3.2 | 7 |
| 62 | Electronic surface structure of $\text{CoSi}_2(111)/\text{Si}(111)$: implications for ballistic electron-emission microscopy currents. <i>Applied Surface Science</i> , 2000, 166, 103-107. | 6.1 | 4 |
| 63 | Green's function calculation of Ballistic Electron Emission Microscopy currents (BEEM v2.1). <i>Computer Physics Communications</i> , 2000, 127, 327-342. | 7.5 | 3 |
| 64 | Electron energy relaxation times from ballistic-electron-emission spectroscopy. <i>Physical Review B</i> , 2000, 61, 4522-4525. | 3.2 | 21 |
| 65 | Hot electron transport in Ballistic Electron Emission Spectroscopy: Band structure effects and k parallel -space currents. <i>Europhysics Letters</i> , 1999, 45, 181-187. | 2.0 | 11 |
| 66 | Quantum chaos on ordered structures by scattering techniques: Application to low-energy electron diffraction. <i>Physical Review B</i> , 1999, 59, 3086-3094. | 3.2 | 3 |
| 67 | A theoretical analysis of ballistic electron emission microscopy: k-space distributions and spectroscopy. <i>Applied Surface Science</i> , 1998, 123-124, 199-206. | 6.1 | 10 |
| 68 | Ballistic Electron Emission Microscopy on $\text{CoSi}_2/\text{Si}(111)$ Interfaces: Band Structure Induced Atomic-Scale Resolution and Role of Localized Surface States. <i>Physical Review Letters</i> , 1998, 81, 4963-4966. | 7.8 | 16 |
| 69 | Quantum-mechanical analysis of the elastic propagation of electrons in the Au/Si system: Application to ballistic-electron-emission microscopy. <i>Physical Review B</i> , 1998, 58, 14036-14046. | 3.2 | 16 |
| 70 | Manifestation of Quantum Chaos in Scattering Techniques: Application to Low-Energy and Photoelectron Diffraction Intensities. <i>Physical Review Letters</i> , 1998, 80, 980-983. | 7.8 | 5 |
| 71 | A Theoretical Analysis of Ballistic Electron Emission Microscopy: Band Structure Effects and Attenuation Lengths. <i>Acta Physica Polonica A</i> , 1998, 93, 281-287. | 0.5 | 0 |
| 72 | A Transport Analysis of the BEEM Spectroscopy of Au/Si Schottky Barriers. <i>Physica Status Solidi (B): Basic Research</i> , 1997, 204, 397-399. | 1.5 | 8 |

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| 73 | Detecting stacking faults during epitaxial growth by low energy electron diffraction. Surface Science, 1996, 345, 320-330. | 1.9 | 16 |
| 74 | Fast first-order perturbation approach to the surface structural problem using low energy electron diffraction. Surface Science, 1996, 348, 197-208. | 1.9 | 1 |
| 75 | Schottky-barrier formation at passivated surfaces: covalent and ionic semiconductors. Applied Surface Science, 1996, 104-105, 183-187. | 6.1 | 2 |
| 76 | Direct reconstruction of three-dimensional atomic adsorption sites by holographic LEED. Physical Review B, 1996, 54, 8172-8176. | 3.2 | 25 |
| 77 | Elastic Scattering and the Lateral Resolution of Ballistic Electron Emission Microscopy: Focusing Effects on the Au/Si Interface. Physical Review Letters, 1996, 76, 807-810. | 7.8 | 58 |
| 78 | Theory of the scanning tunneling microscope: Xe on Ni and Al. Physical Review B, 1996, 54, 2225-2235. | 3.2 | 100 |
| 79 | Adsorption of noble gases on metal surfaces and the scanning tunneling microscope. Progress in Surface Science, 1995, 48, 27-38. | 8.3 | 15 |
| 80 | Adsorption of xenon on metals: a theoretical analysis. Surface Science, 1994, 307-309, 704-709. | 1.9 | 15 |
| 81 | Crystallography of epitaxial face centered tetragonal Co/Cu(100) by low energy electron diffraction. Journal of Magnetism and Magnetic Materials, 1993, 121, 65-68. | 2.3 | 31 |
| 82 | The transport and switching of Xe atoms on the Ni-W interface of a scanning tunnelling microscope. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1993, 15, 451-457. | 0.4 | 1 |
| 83 | Epitaxial growth of cobalt films on Cu(100): a crystallographic LEED determination. Journal of Physics Condensed Matter, 1993, 5, 2055-2062. | 1.8 | 80 |
| 84 | Holographic reconstruction from measured diffuse low-energy-electron-diffraction intensities. Physical Review B, 1992, 45, 9402-9405. | 3.2 | 22 |
| 85 | Transport of physisorbed Xe atoms on Ni(110) using a scanning tunneling microscope: A theoretical approach. Physical Review B, 1992, 45, 8721-8729. | 3.2 | 28 |
| 86 | Advances in direct methods in LEED: the diffuse LEED pattern as a hologram. Surface Science, 1992, 269-270, 1-6. | 1.9 | 10 |
| 87 | A LEED study of $c(2\sqrt{2}\times 2)$ Cu and Ag/Mo(100). Surface Science, 1992, 269-270, 713-718. | 1.9 | 6 |
| 88 | A diffuse LEED study of the adsorption structure of disordered benzene on Pt(111). Surface Science, 1991, 249, 21-34. | 1.9 | 139 |
| 89 | Recent Advances in Diffuse LEED as a Surface Structure Tool. Physica Scripta, 1991, T39, 318-322. | 2.5 | 2 |
| 90 | Holographic LEED. Physical Review Letters, 1990, 64, 1270-1273. | 7.8 | 167 |

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| 91 | Adsorbate induced reconstruction phase $p(2 \times 2)O/Ni(100)$. Surface Science, 1990, 225, 242-248. | 1.9 | 58 |
| 92 | Calculation of the lifetimes for intermediate Rydberg states. Physical Review B, 1989, 39, 10356-10358. | 3.2 | 47 |
| 93 | Adsorption and reaction of CO ₂ on Ni{110}: X-ray photoemission, near-edge X-ray absorption fine-structure and diffuse leed studies. Surface Science, 1988, 206, 1-19. | 1.9 | 89 |
| 94 | Phonon scattering in diffuse leed. Surface Science, 1988, 193, 1-9. | 1.9 | 21 |
| 95 | Diffuse low-energy electron diffraction study of disordered O/Ni(100). Physical Review B, 1988, 38, 12277-12282. | 3.2 | 39 |
| 96 | Lifetime in a two-dimensional image-potential-induced electron band. Physical Review B, 1987, 35, 4529-4532. | 3.2 | 69 |
| 97 | A Barrier Potential Calculation for Tunneling Electrons at a Metal-Metal Interface. Europhysics Letters, 1987, 3, 101-106. | 2.0 | 18 |
| 98 | Electromagnetic properties of small metallic spheres: Diffuse surface scattering. Physical Review B, 1986, 34, 2886-2888. | 3.2 | 2 |
| 99 | Blue shift of the dipolar plasma resonance in small silver particles on an alumina surface. Physical Review B, 1986, 33, 2828-2830. | 3.2 | 44 |
| 100 | Relaxation-time effects in the transverse dielectric function and the electromagnetic properties of metallic surfaces and small particles. Physical Review B, 1986, 34, 7365-7366. | 3.2 | 17 |
| 101 | Quantum-size effects in the electromagnetic response of small spheres. Journal of Physics C: Solid State Physics, 1985, 18, 4951-4956. | 1.5 | 8 |
| 102 | Quantum size and nonlocal effects in the electromagnetic properties of small metallic spheres. Physical Review B, 1985, 32, 7878-7889. | 3.2 | 9 |
| 103 | Surface photoeffect with non specular surface scattering of electrons. Journal De Physique, 1982, 43, 685-689. | 1.8 | 4 |
| 104 | Hydrogen Embrittlement of High Strength Steels. Defect and Diffusion Forum, 0, 289-292, 203-209. | 0.4 | 3 |