# Fabienne Berthier

List of Publications by Year
in descending order

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| 73 | 1,012 | 430754 | 501076 |
|---|---|---|---|
| papers | citations | 18 h-index | 28 g-index |

| 74 | 74 | 74 | 661 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | How to compare superficial and intergranular segregation? A new analysis within the mixed SMAâ€“TBIM approach. Acta Materialia, 1999, 47, 2705-2715. | 3.8 | 63 |
| 2 | Use of a variable-charge interatomic potential for atomistic simulations of bulk, oxygen vacancies, and surfaces of rutileTiO2. Physical Review B, 2006, 73, . | 1.1 | 61 |
| 3 | Intergranular segregation and ordering effect: A mixed Monte Carlo mean-field approach. Physical Review B, 2000, 62, 2813-2824. | 1.1 | 56 |
| 4 | Distinguishability of equivalent circuits containing CPEs. Journal of Electroanalytical Chemistry, 2001, 510, 1-11. | 1.9 | 51 |
| 5 | Site segregation in size-mismatched nanoalloys: Application to Cuâ€“Ag. Surface Science, 2006, 600, 5011-5020. | 0.8 | 38 |
| 6 | Superficial segregation, wetting, and dynamical equilibrium in bimetallic clusters: A Monte Carlo study. Physical Review B, 2008, 78, . | 1.1 | 36 |
| 7 | Identifiability and distinguishability concepts in electrochemistry. Automatica, 1996, 32, 973-984. | 3.0 | 33 |
| 8 | Wetting and Structural Transition Induced by Segregation at Grain Boundaries: A Monte Carlo Study. Physical Review Letters, 2001, 86, 5735-5738. | 2.9 | 31 |
| 9 | Hopf bifurcation and sign of the transfer resistance. Electrochimica Acta, 1999, 44, 2397-2404. | 2.6 | 30 |
| 10 | Model of surface segregation driving forces and their coupling. Physical Review B, 2008, 78, . | 1.1 | 29 |
| 11 | Superficial segregation in nanoparticles: From facets to infinite surfaces. Journal of Chemical Physics, 2006, 125, 094707. | 1.2 | 27 |
| 12 | Steady-state investigation and electrochemical impedance spectroscopy: Identifiability and distinguishability of metal dissolution and passivation mechanisms. Journal of Electroanalytical Chemistry, 1993, 362, 13-20. | 1.9 | 23 |
| 13 | Bifurcation analysis for the Volmer-Heyrovsky mechanism. Journal of Electroanalytical Chemistry, 1996, 402, 29-35. | 1.9 | 23 |
| 14 | Intergranular segregation and vibrational effects: A local analysis. Physical Review B, 2000, 61, 14470-14480. | 1.1 | 22 |
| 15 | Cu-Ag (111) Polymorphism Induced by Segregation and Advacancies. Physical Review Letters, 2003, 91, 176103. | 2.9 | 22 |
| 16 | Guaranteed estimation of electrochemical parameters by set inversion using interval analysis. Journal of Electroanalytical Chemistry, 2000, 495, 1-9. | 1.9 | 21 |
| 17 | Atomistic investigation of the Kolmogorovâ€“Johnsonâ€“Mehlâ€“Avrami law in electrodeposition process. Journal of Electroanalytical Chemistry, 2004, 561, 37-52. | 1.9 | 20 |
| 18 | Dynamical equilibrium in nanoalloys. Faraday Discussions, 2008, 138, 105-117. | 1.6 | 20 |

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|---|---|---|---|
| 19 | Method for Determining the Faradaic Impedance of an Electrode Reaction: Application to Metal Corrosion Rate Measurements. Corrosion, 1995, 51, 105-115. | 0.5 | 18 |
| 20 | Multilayer properties of superficial and intergranular segregation isotherms: A mean-field approach. Physical Review B, 2002, 65, . | 1.1 | 18 |
| 21 | Ag/Cu (001) electrodeposition: beyond the classical nucleation theory. Journal of Electroanalytical Chemistry, 2004, 562, 127-134. | 1.9 | 18 |
| 22 | New Structures and Atomistic Analysis of the Polymorphism for the âˆ‘ = 5 (210) [001] Tilt Boundary. Journal of Materials Science, 2000, 8, 55-69. | 1.2 | 17 |
| 23 | Phase transition induced by superficial segregation: the respective role of the size mismatch and of the chemistry. Surface Science, 2001, 491, 1-16. | 0.8 | 17 |
| 24 | Sur l'identifiabilitÃ© structurelle de la rÃ©action de Volmer-Heyrovsky. Journal De Chimie Physique Et De Physico-Chimie Biologique, 1993, 90, 2069-2081. | 0.2 | 15 |
| 25 | On the nature of the spontaneous oscillations observed for the Koper-Sluyters electrocatalytic reaction. Journal of Electroanalytical Chemistry, 1997, 436, 35-42. | 1.9 | 14 |
| 26 | Structural phase transition induced by interfacial segregation: a comparison between surface and grain boundary. Applied Surface Science, 2001, 177, 243-251. | 3.1 | 14 |
| 27 | The instantaneous impedance of non-stationary electrochemical systems: application to a corroding zinc electrode. Corrosion Science, 1990, 30, 239-247. | 3.0 | 13 |
| 28 | Discontinuous impedance near a saddle-node bifurcation. Journal of Electroanalytical Chemistry, 1996, 410, 247-249. | 1.9 | 13 |
| 29 | Discontinuous immittance due to a saddle node bifurcation. Journal of Electroanalytical Chemistry, 1998, 458, 231-240. | 1.9 | 13 |
| 30 | Extending cluster dynamics to concentrated and disordered alloys: The linear-chain case. Acta Materialia, 2010, 58, 2387-2398. | 3.8 | 13 |
| 31 | Ab initio thermodynamics of carbon segregation on dislocation cores in bcc iron. Modelling and Simulation in Materials Science and Engineering, 2019, 27, 074002. | 0.8 | 13 |
| 32 | Misfit dislocation loops or incommensurate structure at an interface: Vibrational and anharmonic effects. Physical Review B, 2002, 66, . | 1.1 | 12 |
| 33 | Correlation between electrochemical characteristics and microstructures of nickel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1998, 249, 158-166. | 2.6 | 11 |
| 34 | Phase diagrams of nanoalloys: influence of size and morphology. Physical Chemistry Chemical Physics, 2015, 17, 28347-28353. | 1.3 | 11 |
| 35 | Numerical solution of coupled systems of ordinary and partial differential equations. Application to the study of electrochemical insertion reactions by linear sweep voltammetry. Journal of Electroanalytical Chemistry, 2001, 502, 126-131. | 1.9 | 10 |
| 36 | Complete miscibility between different crystallographic structures: Monte Carlo simulations of Cu-Ag deposited on Cu(001). Physical Review B, 2006, 74, . | 1.1 | 10 |

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| 37 | Effect of a size mismatch on bulk and surface alloy interactions: The illustrative example of the Cuâ€“Ag system. Surface Science, 2008, 602, 1903-1915. | 0.8 | 10 |
| 38 | Ageing of out-of-equilibrium nanoalloys by a kinetic mean-field approach. Physical Chemistry Chemical Physics, 2015, 17, 28193-28199. | 1.3 | 10 |
| 39 | An â€œinverseâ€•growth of Ag(111) on Cu(001) obtained by superficial segregation. Surface Science, 2001, 491, L651-L656. | 0.8 | 9 |
| 40 | Study of the forced Ni\|1 M H2SO4 oscillator. Journal of Electroanalytical Chemistry, 2004, 572, 267-281. | 1.9 | 9 |
| 41 | Mesure de la pulsation propre de Hopf par spectroscopie dâ€™impÃ©dance Ã©lectrochlmique : application Ã  la dissolution transpassive du nickel. Journal De Chimie Physique Et De Physico-Chimie Biologique, 1997, 94, 1763-1778. | 0.2 | 9 |
| 42 | Choice of experimental method induced by structural properties of mechanisms. Journal of Electroanalytical Chemistry, 1995, 399, 1-6. | 1.9 | 8 |
| 43 | Unexpected profiles of surface segregation vibrational entropies. Surface Science, 2003, 526, 121-132. | 0.8 | 8 |
| 44 | Order-disorder or phase-separation transition: Analysis of the Au-Pd system by the effective site energy model. Physical Review B, 2019, 99, . | 1.1 | 8 |
| 45 | Voltammetry and electrodeposition in the presence of attractive interactions: I. a mean-field approach. Journal of Electroanalytical Chemistry, 2004, 573, 365-376. | 1.9 | 7 |
| 46 | Voltammetry and electrodeposition in the presence of attractive interactions: II. from Monte Carlo simulations to the KJMAâ€“ECNT approach. Journal of Electroanalytical Chemistry, 2004, 573, 377-389. | 1.9 | 7 |
| 47 | AuNi alloy monolayer films electrodeposited on Au(111): An in situ STM study. Surface Science, 2013, 607, 25-32. | 0.8 | 7 |
| 48 | Stability Diagram of Janus and Coreâ€“Shell Configurations in Bimetallic Nanowires. Journal of Physical Chemistry C, 2016, 120, 22670-22680. | 1.5 | 7 |
| 49 | Tight-binding Ising modeling of the interplay between bulk ordering and surface segregation in Pt-Ag nanoalloys. Surface Science, 2020, 700, 121626. | 0.8 | 6 |
| 50 | Study of the microstructure of a Ni(100) single crystal grown by electron beam floating zone melting. Journal of Crystal Growth, 1995, 156, 480-486. | 0.7 | 5 |
| 51 | Segregation and 2D-Compound in a Grain Boundary: An Exotic Behaviour. Materials Science Forum, 1999, 294-296, 423-426. | 0.3 | 5 |
| 52 | Vacancy Segregation at Surface Grain Boundaries and their Intersection: an Atomistic Study. Defect and Diffusion Forum, 2001, 194-199, 1217-1222. | 0.4 | 5 |
| 53 | Effective site-energy model: A thermodynamic approach applied to size-mismatched alloys. Physical Review B, 2017, 95, . | 1.1 | 5 |
| 54 | Intergranular Segregation in Cu(Ag) and Ag(Cu) Systems: Analysis of the Driving Force Using a Tight-Binding Scheme. Materials Science Forum, 1996, 207-209, 701-704. | 0.3 | 4 |

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|---|---|---|---|
| 55 | Discontinuous immitance due to a saddle node bifurcation. Journal of Electroanalytical Chemistry, 1999, 460, 226-233. | 1.9 | 4 |
| 56 | Superficial Phase Transitions in Nanoalloys. Solid State Phenomena, 0, 172-174, 658-663. | 0.3 | 4 |
| 57 | Segregation and Phase Transitions in Reduced Dimension: From Bulk to Clusters via Surfaces. Engineering Materials, 2012, , 227-257. | 0.3 | 3 |
| 58 | Diagrammes d'impÃ©dance discontinus pour la rÃ©action de Volmer-Heyrovsky. Journal De Chimie Physique Et De Physico-Chimie Biologique, 1998, 95, 1101-1117. | 0.2 | 3 |
| 59 | Drastic changes for segregation and wetting between flat and vicinal surfaces of binary alloys. Surface Science, 2004, 553, 168-180. | 0.8 | 2 |
| 60 | Reply to â€œComment on â€˜Use of a variable-charge interatomic potential for atomistic simulations of bulk, oxygen vacancies, and surfaces of rutile<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi mathvariant="normal">Ti</mml:mi><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>â€™ â€. Physical Review B, 2007, 76, . | 1.1 | 2 |
| 61 | Magic Numbers for Bimetallic Clusters. Solid State Phenomena, 0, 172-174, 1038-1043. | 0.3 | 2 |
| 62 | Segregation in bimetallic nanowires: Size and thermodynamic ensemble effects. Physical Review B, 2012, 86, . | 1.1 | 2 |
| 63 | Correlation between the Electrochemical Behavior and the Surface Energy of Single Nickel Crystals. Materials Science Forum, 1993, 126-128, 503-506. | 0.3 | 1 |
| 64 | Equilibrium Distribution of Alloyed Nanowires. Solid State Phenomena, 0, 172-174, 676-681. | 0.3 | 1 |
| 65 | Multiscale Modelling of the Ageing Kinetics of a 2D Deposit. Solid State Phenomena, 0, 172-174, 664-669. | 0.3 | 1 |
| 66 | Analysis of Auâ€“Pd driving forces via the effective site energy model: LRO, antisites and enthalpy of permutation. Journal of Physics Condensed Matter, 2020, 32, 354001. | 0.7 | 1 |
| 67 | Sensitivity analysis and uncertainty propagation for SMA-TB potentials. Computational Materials Science, 2022, 213, 111641. | 1.4 | 1 |
| 68 | Identifiability and Distinguishability Concepts in Electrochemistry. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1994, 27, 995-1000. | 0.4 | 0 |
| 69 | SÃ©grÃ©gation interfaciale et ruptureÂ: l'apport d'une approche atomistique â€œmixteâ€. European Physical Journal Special Topics, 2003, 106, 13-22. | 0.2 | 0 |
| 70 | Reliable Discrimination of Models Based on EIS Data. Journal of the Electrochemical Society, 2009, 156, J81. | 1.3 | 0 |
| 71 | Extending cluster description to bimetallic nanowires: The ideal solid solution alloy case. Journal of Chemical Physics, 2011, 135, 224702. | 1.2 | 0 |
| 72 | Effective site energy and cluster expansion approaches for the study of phase diagrams. Physical Review B, 2021, 104, . | 1.1 | 0 |

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|---|---|---|---|
| 73 | Ordre intergranulaire et dÃ©mixtion de volume : une Ã©tonnante coexistence. European Physical Journal Special Topics, 1999, 09, Pr4-51-Pr4-56. | 0.2 | 0 |