# Vincent Consonni

List of Publications by Year
in descending order



| | | | |
|---|---|---|---|
| 102 papers | 3,146 citations | 134610<br>34 h-index | 198040<br>52 g-index |
| 111 all docs | 111 docs citations | 111 times ranked | 3663 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | High carrier mobility in single-crystal PtSe<sub>2</sub> grown by molecular beam epitaxy on ZnO(0001). 2D Materials, 2022, 9, 015015. | 2.0 | 10 |
| 2 | Tuneable polarity and enhanced piezoelectric response of ZnO thin films grown by metalâ€“organic chemical vapour deposition through the flow rate adjustment. Materials Advances, 2022, 3, 498-513. | 2.6 | 5 |
| 3 | <i>In situ</i> analysis of the nucleation of O- and Zn-polar ZnO nanowires using synchrotron-based X-ray diffraction. Nanoscale, 2022, 14, 680-690. | 2.8 | 1 |
| 4 | Optimization of the Sb2S3 Shell Thickness in ZnO Nanowire-Based Extremely Thin Absorber Solar Cells. Nanomaterials, 2022, 12, 198. | 1.9 | 4 |
| 5 | Enhanced photocatalytic activity of chemically deposited ZnO nanowires using doping and annealing strategies for water remediation. Applied Surface Science, 2022, 582, 152323. | 3.1 | 15 |
| 6 | Modulating the growth of chemically deposited ZnO nanowires and the formation of nitrogen- and hydrogen-related defects using pH adjustment. Nanoscale Advances, 2022, 4, 1793-1807. | 2.2 | 11 |
| 7 | Implementing the Reactor Geometry in the Modeling of Chemical Bath Deposition of ZnO Nanowires. Nanomaterials, 2022, 12, 1069. | 1.9 | 7 |
| 8 | Optimization Strategies Used for Boosting Piezoelectric Response of Biosensor Based on Flexible Micro-ZnO Composites. Biosensors, 2022, 12, 245. | 2.3 | 6 |
| 9 | Chemical Bath Deposition of ZnO Nanowires Using Copper Nitrate as an Additive for Compensating Doping. Inorganic Chemistry, 2021, 60, 1612-1623. | 1.9 | 19 |
| 10 | Dimensional Roadmap for Maximizing the Piezoelectrical Response of ZnO Nanowire-Based Transducers: Impact of Growth Method. Nanomaterials, 2021, 11, 941. | 1.9 | 18 |
| 11 | Polarity in ZnO nanowires: A critical issue for piezotronic and piezoelectric devices. Nano Energy, 2021, 83, 105789. | 8.2 | 68 |
| 12 | Engineering nitrogen- and hydrogen-related defects in ZnO nanowires using thermal annealing. Physical Review Materials, 2021, 5, . | 0.9 | 10 |
| 13 | Potential substitutes for critical materials in white LEDs: Technological challenges and market opportunities. Renewable and Sustainable Energy Reviews, 2021, 143, 110869. | 8.2 | 38 |
| 14 | Characterizing and Optimizing Piezoelectric Response of ZnO Nanowire/PMMA Composite-Based Sensor. Nanomaterials, 2021, 11, 1712. | 1.9 | 13 |
| 15 | Effects of thermal annealing on the structural and electrical properties of ZnO thin films for boosting their piezoelectric response. Journal of Alloys and Compounds, 2021, 870, 159512. | 2.8 | 21 |
| 16 | Evidence of Piezoelectric Potential and Screening Effect in Single Highly Doped ZnO:Ga and ZnO:Al Nanowires by Advanced Scanning Probe Microscopy. Journal of Physical Chemistry C, 2021, 125, 15373-15383. | 1.5 | 15 |
| 17 | Study of structural and electrical properties of ferroelectric HZO films obtained by single-target sputtering. AIP Advances, 2021, 11, . | 0.6 | 6 |
| 18 | Template-Assisted Growth of Open-Ended TiO<sub>2</sub> Nanotubes with Hexagonal Shape Using Atomic Layer Deposition. Crystal Growth and Design, 2021, 21, 125-132. | 1.4 | 1 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Chemical Synthesis of Î²-Ga<sub>2</sub>O<sub>3</sub> Microrods on Silicon and Its Dependence on the Gallium Nitrate Concentration. Inorganic Chemistry, 2020, 59, 15696-15706. | 1.9 | 14 |
| 20 | Rare-earth-free zinc aluminium borate white phosphors for LED lighting. Journal of Materials Chemistry C, 2020, 8, 11839-11849. | 2.7 | 13 |
| 21 | Morphology Transition of ZnO from Thin Film to Nanowires on Silicon and its Correlated Enhanced Zinc Polarity Uniformity and Piezoelectric Responses. ACS Applied Materials & Interfaces, 2020, 12, 29583-29593. | 4.0 | 11 |
| 22 | Zinc Vacancyâ€"Hydrogen Complexes as Major Defects in ZnO Nanowires Grown by Chemical Bath Deposition. Journal of Physical Chemistry C, 2020, 124, 16652-16662. | 1.5 | 33 |
| 23 | Schottky Contacts on Polarity-Controlled Vertical ZnO Nanorods. ACS Applied Materials & Interfaces, 2020, 12, 13217-13228. | 4.0 | 14 |
| 24 | Epitaxial TiO2 Shell Grown by Atomic Layer Deposition on ZnO Nanowires Using a Double-Step Process and Its Beneficial Passivation Effect. Journal of Physical Chemistry C, 2020, 124, 13447-13455. | 1.5 | 6 |
| 25 | The Path of Gallium from Chemical Bath into ZnO Nanowires: Mechanisms of Formation and Incorporation. Inorganic Chemistry, 2019, 58, 10269-10279. | 1.9 | 15 |
| 26 | ZnO Nanowires as a Promotor of High Photoinduced Efficiency and Voltage Gain for Cathode Battery Recharging. ACS Applied Energy Materials, 2019, 2, 6254-6262. | 2.5 | 7 |
| 27 | Modeling the Elongation of Nanowires Grown by Chemical Bath Deposition Using a Predictive Approach. Journal of Physical Chemistry C, 2019, 123, 29476-29483. | 1.5 | 18 |
| 28 | ZnO nanowires for solar cells: a comprehensive review. Nanotechnology, 2019, 30, 362001. | 1.3 | 96 |
| 29 | Formation mechanisms of ZnO nanowires on polycrystalline Au seed layers for piezoelectric applications. Nanotechnology, 2019, 30, 345601. | 1.3 | 10 |
| 30 | Effects of Polyethylenimine and Its Molecular Weight on the Chemical Bath Deposition of ZnO Nanowires. ACS Omega, 2018, 3, 12457-12464. | 1.6 | 19 |
| 31 | Well-ordered ZnO nanowires with controllable inclination on semipolar ZnO surfaces by chemical bath deposition. Nanotechnology, 2018, 29, 475601. | 1.3 | 32 |
| 32 | Polarity-Dependent High Electrical Conductivity of ZnO Nanorods and Its Relation to Hydrogen. Journal of Physical Chemistry C, 2018, 122, 22767-22775. | 1.5 | 34 |
| 33 | ZnO/CuCrO<sub>2</sub> Coreâ€"Shell Nanowire Heterostructures for Selfâ€Powered UV Photodetectors with Fast Response. Advanced Functional Materials, 2018, 28, 1803142. | 7.8 | 75 |
| 34 | Synthesis and properties of ZnO/TiO<sub>2</sub>/Sb<sub>2</sub>S<sub>3</sub> coreâ€"shell nanowire heterostructures using the SILAR technique. CrystEngComm, 2018, 20, 4455-4462. | 1.3 | 10 |
| 35 | Tunable Morphology and Doping of ZnO Nanowires by Chemical Bath Deposition Using Aluminum Nitrate. Journal of Physical Chemistry C, 2017, 121, 3573-3583. | 1.5 | 26 |
| 36 | Quantitative and simultaneous analysis of the polarity of polycrystalline ZnO seed layers and related nanowires grown by wet chemical deposition. Nanotechnology, 2017, 28, 095704. | 1.3 | 11 |

| # | Article | IF | Citations |
|---|---|---|---|
| 37 | In situ analysis of the crystallization process of Sb 2 S 3 thin films by Raman scattering and X-ray diffraction. Materials and Design, 2017, 121, 1-10. | 3.3 | 72 |
| 38 | Phase discrimination in CdSe structures by means of Raman scattering. Physica Status Solidi - Rapid Research Letters, 2017, 11, 1700006. | 1.2 | 9 |
| 39 | ZnO/TiO<sub>2</sub>/Sb<sub>2</sub>S<sub>3</sub> Coreâ€“Shell Nanowire Heterostructure for Extremely Thin Absorber Solar Cells. Journal of Physical Chemistry C, 2017, 121, 9672-9680. | 1.5 | 66 |
| 40 | Tuning the properties of F:SnO<sub>2</sub> (FTO) nanocomposites with S:TiO<sub>2</sub> nanoparticles â€“ promising hazy transparent electrodes for photovoltaics applications. Journal of Materials Chemistry C, 2017, 5, 91-102. | 2.7 | 15 |
| 41 | Polarity-Dependent Growth Rates of Selective Area Grown ZnO Nanorods by Chemical Bath Deposition. Langmuir, 2017, 33, 6269-6279. | 1.6 | 32 |
| 42 | Effects of the pH on the Formation and Doping Mechanisms of ZnO Nanowires Using Aluminum Nitrate and Ammonia. Inorganic Chemistry, 2017, 56, 13111-13122. | 1.9 | 33 |
| 43 | High quality epitaxial fluorine-doped SnO2 films by ultrasonic spray pyrolysis: Structural and physical property investigation. Materials and Design, 2017, 132, 518-525. | 3.3 | 15 |
| 44 | Room temperature optical response of zinc oxide nanowires synthesized by chemical bath deposition to toluene vapors. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 1115-1119. | 0.8 | 2 |
| 45 | Characterization of carrier concentration in ZnO nanowires by scanning capacitance microscopy. Physica Status Solidi C: Current Topics in Solid State Physics, 2016, 13, 576-580. | 0.8 | 9 |
| 46 | Polarity in GaN and ZnO: Theory, measurement, growth, and devices. Applied Physics Reviews, 2016, 3, . | 5.5 | 105 |
| 47 | Identification of extended defect and interface related luminescence lines in polycrystalline ZnO thin films grown by solâ€“gel process. RSC Advances, 2016, 6, 44987-44992. | 1.7 | 9 |
| 48 | Materials for Photovoltaic Solar Cells. , 2016, , 27-91. | | 0 |
| 49 | Effect of Strontium Incorporation on the p-Type Conductivity of Cu<sub>2</sub>O Thin Films Deposited by Metalâ€“Organic Chemical Vapor Deposition. Journal of Physical Chemistry C, 2016, 120, 17261-17267. | 1.5 | 14 |
| 50 | Identifying and mapping the polytypes and orientation relationships in ZnO/CdSe coreâ€“shell nanowire arrays. Nanotechnology, 2016, 27, 445712. | 1.3 | 5 |
| 51 | Effects of Hexamethylenetetramine on the Nucleation and Radial Growth of ZnO Nanowires by Chemical Bath Deposition. Journal of Physical Chemistry C, 2016, 120, 5242-5250. | 1.5 | 120 |
| 52 | Light absorption processes and optimization of ZnO/CdTe coreâ€“shell nanowire arrays for nanostructured solar cells. Nanotechnology, 2015, 26, 075401. | 1.3 | 17 |
| 53 | Physical Properties of Annealed ZnO Nanowire/CuSCN Heterojunctions for Self-Powered UV Photodetectors. ACS Applied Materials & Interfaces, 2015, 7, 5820-5829. | 4.0 | 67 |
| 54 | Spontaneous shape transition of thin films into ZnO nanowires with high structural and optical quality. Nanoscale, 2015, 7, 16994-17003. | 2.8 | 9 |

| # | Article | IF | Citations |
|---|---|---|---|
| 55 | Controlling the Structural Properties of Single Step, Dip Coated ZnO Seed Layers for Growing Perfectly Aligned Nanowire Arrays. Journal of Physical Chemistry C, 2015, 119, 21694-21703. | 1.5 | 42 |
| 56 | Towards Self-Powered Systems: Using Nanostructures to Harvest Ambient Energy. Engineering Materials, 2014, , 223-240. | 0.3 | 1 |
| 57 | Light trapping in ZnO nanowire arrays covered with an absorbing shell for solar cells. Optics Express, 2014, 22, A1174. | 1.7 | 40 |
| 58 | Origin of the nonradiative decay of bound excitons in GaN nanowires. Physical Review B, 2014, 90, . | 1.1 | 32 |
| 59 | Correlation between the structural and optical properties of spontaneously formed GaN nanowires: a quantitative evaluation of the impact of nanowire coalescence. Nanotechnology, 2014, 25, 455702. | 1.3 | 44 |
| 60 | Selective Area Growth of Well-Ordered ZnO Nanowire Arrays with Controllable Polarity. ACS Nano, 2014, 8, 4761-4770. | 7.3 | 78 |
| 61 | Local band bending and grain-to-grain interaction induced strain nonuniformity in polycrystalline CdTe films. Physical Review B, 2014, 89, . | 1.1 | 19 |
| 62 | Toward an efficient extremely thin absorber solar cell based on ZnO nanowire arrays. , 2014, , . | | 0 |
| 63 | High Performance ZnO-SnO<sub>2</sub>:F Nanocomposite Transparent Electrodes for Energy Applications. ACS Applied Materials & Interfaces, 2014, 6, 14096-14107. | 4.0 | 57 |
| 64 | Improvement of the physical properties of ZnO/CdTe core-shell nanowire arrays by CdCl2 heat treatment for solar cells. Nanoscale Research Letters, 2014, 9, 222. | 3.1 | 11 |
| 65 | Comparison of optical properties of Si and ZnO/CdTe core/shell nanowire arrays. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2013, 178, 665-669. | 1.7 | 19 |
| 66 | Selfâ€induced growth of GaN nanowires by molecular beam epitaxy: A critical review of the formation mechanisms. Physica Status Solidi - Rapid Research Letters, 2013, 7, 699-712. | 1.2 | 89 |
| 67 | Fluorine-doped SnO 2 thin films deposited on polymer substrate for flexible transparent electrodes. Thin Solid Films, 2013, 545, 302-309. | 0.8 | 15 |
| 68 | Preferential orientation of fluorine-doped SnO2 thin films: The effects of growth temperature. Acta Materialia, 2013, 61, 22-31. | 3.8 | 74 |
| 69 | Formation Mechanisms of ZnO Nanowires: The Crucial Role of Crystal Orientation and Polarity. Journal of Physical Chemistry C, 2013, 117, 20738-20745. | 1.5 | 60 |
| 70 | Extended-Defect-Related Photoluminescence Line at 3.33 eV in Nanostructured ZnO Thin Films. Applied Physics Express, 2013, 6, 111101. | 1.1 | 8 |
| 71 | Electron scattering mechanisms in fluorine-doped SnO2 thin films. Journal of Applied Physics, 2013, 114, . | 1.1 | 52 |
| 72 | Fluorine doped tin oxide (FTO) thin film as transparent conductive oxide (TCO) for photovoltaic applications. AIP Conference Proceedings, 2013, , . | 0.3 | 17 |

| # | Article | IF | Citations |
|---|---|---|---|
| 73 | MODELING OF NITRIDE NANOWIRES GROWTH: SCALING GROWTH OF GaN NANOWIRES. , 2013, , . | | 0 |
| 74 | Thickness effects on the texture development of fluorine-doped SnO2 thin films: The role of surface and strain energy. Journal of Applied Physics, 2012, 111, . | 1.1 | 63 |
| 75 | Scaling growth kinetics of self-induced GaN nanowires. Applied Physics Letters, 2012, 100, . | 1.5 | 60 |
| 76 | Critical Nucleation Effects on the Structural Relationship Between ZnO Seed Layer and Nanowires. Journal of Physical Chemistry C, 2012, 116, 25106-25111. | 1.5 | 89 |
| 77 | Quantitative description for the growth rate of self-induced GaN nanowires. Physical Review B, 2012, 85, . | 1.1 | 80 |
| 78 | Scaling thermodynamic model for the self-induced nucleation of GaN nanowires. Physical Review B, 2012, 85, . | 1.1 | 53 |
| 79 | Publisher's Note: Scaling thermodynamic model for the self-induced nucleation of GaN nanowires [Phys. Rev. B<b>85</b>, 165317 (2012)]. Physical Review B, 2012, 85, . | 1.1 | 1 |
| 80 | Efficient Dye-Sensitized Solar Cells Made from ZnO Nanostructure Composites. Journal of Physical Chemistry C, 2012, 116, 18117-18123. | 1.5 | 42 |
| 81 | Nucleation and coalescence effects on the density of self-induced GaN nanowires grown by molecular beam epitaxy. Applied Physics Letters, 2011, 98, 071913. | 1.5 | 41 |
| 82 | Synthesis and physical properties of ZnO/CdTe core shell nanowires grown by low-cost deposition methods. Applied Physics Letters, 2011, 98, . | 1.5 | 52 |
| 83 | Nucleation mechanisms of self-induced GaN nanowires grown on an amorphous interlayer. Physical Review B, 2011, 83, . | 1.1 | 110 |
| 84 | Nitride nanowire structures for LED applications. Proceedings of SPIE, 2011, , . | 0.8 | 1 |
| 85 | Fabrication and characterization of a composite ZnO semiconductor as electron transporting layer in dye-sensitized solar cells. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2011, 176, 653-659. | 1.7 | 42 |
| 86 | Effects of chlorine drag on the annealing-induced abnormal grain growth in polycrystalline CdTe. Journal of Crystal Growth, 2011, 316, 1-5. | 0.7 | 5 |
| 87 | Physical origin of the incubation time of self-induced GaN nanowires. Applied Physics Letters, 2011, 99, 033102. | 1.5 | 57 |
| 88 | Morphological and electrical characterization of ZnO nanocomposites in dye-sensitized solar cells. Journal of Renewable and Sustainable Energy, 2011, 3, . | 0.8 | 6 |
| 89 | Zinc oxide nanostructured material for dye sensitized solar cells. , 2010, , . | | 0 |
| 90 | Unpinning the Fermi level of GaN nanowires by ultraviolet radiation. Physical Review B, 2010, 82, . | 1.1 | 60 |

| # | Article | IF | Citations |
|---|---|---|---|
| 91 | Nucleation mechanisms of epitaxial GaN nanowires: Origin of their self-induced formation and initial radius. Physical Review B, 2010, 81, . | 1.1 | 138 |
| 92 | <i>In situ</i>analysis of strain relaxation during catalyst-free nucleation and growth of GaN nanowires. Nanotechnology, 2010, 21, 245705. | 1.3 | 46 |
| 93 | Local redistribution of dopants and defects induced by annealing in polycrystalline compound semiconductors. Physical Review B, 2009, 80, . | 1.1 | 17 |
| 94 | Correlated structural reordering and dopant redistribution in annealed polycrystalline CdTe. Journal of Applied Physics, 2009, 105, 083535. | 1.1 | 18 |
| 95 | Effects of nanowire coalescence on their structural and optical properties on a local scale. Applied Physics Letters, 2009, 95, . | 1.5 | 84 |
| 96 | The flow stress in polycrystalline films: Dimensional constraints and strengthening effects. Acta Materialia, 2008, 56, 6087-6096. | 3.8 | 11 |
| 97 | Plasticity induced texture development in thick polycrystalline CdTe: Experiments and modeling. Journal of Applied Physics, 2008, 103, 063529. | 1.1 | 32 |
| 98 | Correlated Evolution of the Structural and the Optical Properties During the Growth of Cl-Doped Polycrystalline CdTe. Journal of the Korean Physical Society, 2008, 53, 2808-2810. | 0.3 | 0 |
| 99 | Effects of island coalescence on the compensation mechanisms in chlorine doped polycrystalline CdTe. Journal of Applied Physics, 2007, 101, 063522. | 1.1 | 21 |
| 100 | Evolution Of Cathodoluminescence Spectra Upon CdTe Island Coalescence. AIP Conference Proceedings, 2007, , . | 0.3 | 0 |
| 101 | Compensation and defect passivation processes in polycrystalline CdTe: Cl layers. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 807-811. | 0.8 | 6 |
| 102 | Spectroscopic analysis of defects in chlorine doped polycrystalline CdTe. Journal of Applied Physics, 2006, 99, 053502. | 1.1 | 36 |