

Massimo Catalano

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2020846/publications.pdf>

Version: 2024-02-01

99
papers

2,829
citations

186265

28
h-index

189892

50
g-index

99
all docs

99
docs citations

99
times ranked

3929
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Room Temperature Lasing at Blue Wavelengths in Gallium Nitride Microcavities. <i>Science</i> , 1999, 285, 1905-1906. | 12.6 | 237 |
| 2 | Ru Nanoframes with an fcc Structure and Enhanced Catalytic Properties. <i>Nano Letters</i> , 2016, 16, 2812-2817. | 9.1 | 187 |
| 3 | Synthesis and Characterization of CdS Nanoclusters in a Quaternary Microemulsion: the Role of the Cosurfactant. <i>Journal of Physical Chemistry B</i> , 2000, 104, 8391-8397. | 2.6 | 173 |
| 4 | Silver nanocrystals in silica by sol-gel processing. <i>Journal of Non-Crystalline Solids</i> , 1996, 194, 225-234. | 3.1 | 128 |
| 5 | Formation of copper and silver nanometer dimension clusters in silica by the sol-gel process. <i>Applied Physics Letters</i> , 1996, 68, 3820-3822. | 3.3 | 124 |
| 6 | Antibacterial coatings on haemodialysis catheters by photochemical deposition of silver nanoparticles. <i>Journal of Materials Science: Materials in Medicine</i> , 2011, 22, 2005-2012. | 3.6 | 100 |
| 7 | Tuning InAs/GaAs quantum dot properties under Stranski-Krastanov growth mode for 1.3 μm applications. <i>Journal of Applied Physics</i> , 2002, 91, 6710. | 2.5 | 95 |
| 8 | Annealing behavior of silver, copper, and silver-copper nanoclusters in a silica matrix synthesized by the sol-gel technique. <i>Journal of Applied Physics</i> , 1996, 80, 6734-6739. | 2.5 | 90 |
| 9 | Enhanced thermal conductivity in Cu/diamond composites by tailoring the thickness of interfacial TiC layer. <i>Composites Part A: Applied Science and Manufacturing</i> , 2018, 113, 76-82. | 7.6 | 80 |
| 10 | Synthesis and structural characterisation of CdS nanoparticles prepared in a four-components water-in-oil microemulsion. <i>Micron</i> , 2000, 31, 253-258. | 2.2 | 76 |
| 11 | Tailoring MWCNTs and β -Cyclodextrin for Sensitive Detection of Acetaminophen and Estrogen. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 21411-21427. | 8.0 | 66 |
| 12 | Porous Silica-Coated α -Fe ₂ O ₃ Ceramics for Humidity Measurement at Elevated Temperature. <i>Journal of the American Ceramic Society</i> , 1996, 79, 927-937. | 3.8 | 65 |
| 13 | Biphase TiO ₂ Microspheres with Enhanced Photocatalytic Activity. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 7931-7938. | 3.7 | 65 |
| 14 | Studies of two-dimensional h-BN and MoS ₂ for potential diffusion barrier application in copper interconnect technology. <i>Npj 2D Materials and Applications</i> , 2017, 1, . | 7.9 | 57 |
| 15 | Plasma-Deposition of Ag-Containing Polyethyleneoxide-Like Coatings. <i>Plasmas and Polymers</i> , 2000, 5, 1-14. | 1.5 | 54 |
| 16 | Peroxidase-like properties of Ruthenium nanoframes. <i>Science Bulletin</i> , 2016, 61, 1739-1745. | 9.0 | 45 |
| 17 | Nonpolar Resistive Switching of Multilayer h-BN Based Memories. <i>Advanced Electronic Materials</i> , 2020, 6, 1900979. | 5.1 | 42 |
| 18 | Structural study of InGaAs/GaAs quantum dots grown by metalorganic chemical vapor deposition for optoelectronic applications at 1.3 μm . <i>Journal of Applied Physics</i> , 2001, 89, 4341-4348. | 2.5 | 41 |

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 19 | High stability of ultra-small and isolated gold nanoparticles in metal-organic framework materials. <i>Journal of Materials Chemistry A</i> , 2019, 7, 17536-17546. | 10.3 | 41 |
| 20 | Microstructural characterization of MoO ₃ -TiO ₂ nanocomposite thin films for gas sensing. <i>Sensors and Actuators B: Chemical</i> , 2001, 77, 27-34. | 7.8 | 40 |
| 21 | Chemical aspects in copper-implanted fused silica and soda-lime glasses. <i>Journal of Applied Physics</i> , 1995, 77, 1294-1300. | 2.5 | 37 |
| 22 | Enhancing Interconnect Reliability and Performance by Converting Tantalum to 2D Layered Tantalum Sulfide at Low Temperature. <i>Advanced Materials</i> , 2019, 31, e1902397. | 21.0 | 35 |
| 23 | Enhancement of the optically activated NO ₂ gas sensing response of brookite TiO ₂ nanorods/nanoparticles thin films deposited by matrix-assisted pulsed-laser evaporation. <i>Sensors and Actuators B: Chemical</i> , 2012, 161, 869-879. | 7.8 | 34 |
| 24 | Synthesis and Characterization of Collagen Scaffolds Reinforced by Eggshell Derived Hydroxyapatite for Tissue Engineering. <i>Journal of Nanoscience and Nanotechnology</i> , 2015, 15, 504-509. | 0.9 | 34 |
| 25 | Indium segregation in N-polar InGaN quantum wells evidenced by energy dispersive X-ray spectroscopy and atom probe tomography. <i>Applied Physics Letters</i> , 2017, 110, . | 3.3 | 34 |
| 26 | Novel polymeric sorbents based on imprinted Hg(II)-diphenylcarbazone complexes for mercury removal from drinking water. <i>Polymer Journal</i> , 2016, 48, 73-79. | 2.7 | 33 |
| 27 | Influence of annealing atmosphere on metal and metal alloy nanoclusters produced by ion implantation in silica. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2001, 178, 176-179. | 1.4 | 32 |
| 28 | Comparison of radiative and structural properties of 1.3 μm In _x Ga(1-x)As quantum-dot laser structures grown by metalorganic chemical vapor deposition and molecular-beam epitaxy: Effect on the lasing properties. <i>Applied Physics Letters</i> , 2003, 82, 3632-3634. | 3.3 | 31 |
| 29 | Green production of polymer-supported PdNPs: application to the environmentally benign catalyzed synthesis of cis-3-hexen-1-ol under flow conditions. <i>Dalton Transactions</i> , 2012, 41, 12666. | 3.3 | 27 |
| 30 | Role of oxygen contaminant on the physical properties of sputtered AlN thin films. <i>Journal of Alloys and Compounds</i> , 2015, 649, 1267-1272. | 5.5 | 25 |
| 31 | (1 0 1) and (0 0 2) oriented AlN thin films deposited by sputtering. <i>Materials Letters</i> , 2017, 200, 18-20. | 2.6 | 24 |
| 32 | Engineering the Palladium-WSe ₂ Interface Chemistry for Field Effect Transistors with High-Performance Hole Contacts. <i>ACS Applied Nano Materials</i> , 2019, 2, 75-88. | 5.0 | 24 |
| 33 | Films of brookite TiO ₂ nanorods/nanoparticles deposited by matrix-assisted pulsed laser evaporation as NO ₂ gas-sensing layers. <i>Applied Physics A: Materials Science and Processing</i> , 2011, 104, 963-968. | 2.3 | 23 |
| 34 | Electrochemical fabrication of nanoporous gold-supported manganese oxide nanowires based on electrodeposition from eutectic urea/choline chloride ionic liquid. <i>Electrochimica Acta</i> , 2013, 87, 918-924. | 5.2 | 23 |
| 35 | Luminescent Silica-Based Nanostructures from in Vivo Iridium-Doped Diatoms Microalgae. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 2207-2215. | 6.7 | 23 |
| 36 | MAPLE deposition of nanomaterials. <i>Applied Surface Science</i> , 2014, 302, 92-98. | 6.1 | 22 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 37 | Atomic Layer Deposition of Layered Boron Nitride for Large-Area 2D Electronics. ACS Applied Materials & Interfaces, 2020, 12, 36688-36694. | 8.0 | 22 |
| 38 | Structural and electrical characterisation of molybdenum-titanium mixed oxides for ethanol sensing deposited by RF sputtering. Sensors and Actuators B: Chemical, 2003, 92, 286-291. | 7.8 | 20 |
| 39 | Pulsed laser deposition of a dense and uniform Au nanoparticles layer for surface plasmon enhanced efficiency hybrid solar cells. Journal of Nanoparticle Research, 2013, 15, 1. | 1.9 | 20 |
| 40 | Controlling Carrier Type and Concentration in NiO Films To Enable <i>in Situ</i> PN Homojunctions. ACS Applied Materials & Interfaces, 2019, 11, 27048-27056. | 8.0 | 20 |
| 41 | Microphotoluminescence spectroscopy of vertically stacked In _x Ga _{1-x} As/GaAs quantum wires. Physical Review B, 1998, 58, 1962-1966. | 3.2 | 19 |
| 42 | Direct quantitative measurement of compositional enrichment and variations in In _y Ga _{1-y} As quantum dots. Applied Physics Letters, 2001, 79, 3170-3172. | 3.3 | 19 |
| 43 | Structure and magnetic properties of alloy-based nanoparticles silica composites prepared by ion-implantation and sol-gel techniques. Materials Science and Engineering C, 2001, 15, 59-61. | 7.3 | 18 |
| 44 | Metal-organic chemical vapor deposition of high quality, high indium composition N-polar InGaN layers for tunnel devices. Journal of Applied Physics, 2017, 121, 185707. | 2.5 | 18 |
| 45 | The composition and structure of SIPOS: A high spatial resolution electron microscopy study. Journal of Materials Research, 1993, 8, 2893-2901. | 2.6 | 17 |
| 46 | Noncovalent imprinted microspheres: Preparation, evaluation and selectivity of DBU template. Journal of Applied Polymer Science, 2007, 105, 2190-2197. | 2.6 | 17 |
| 47 | Quasi-in-Situ Single-Grain Photoelectron Microspectroscopy of Co/PPy Nanocomposites under Oxygen Reduction Reaction. ACS Applied Materials & Interfaces, 2014, 6, 19621-19629. | 8.0 | 17 |
| 48 | Metal-Organic-Inorganic Nanocomposite Thermal Interface Materials with Ultralow Thermal Resistances. ACS Applied Materials & Interfaces, 2017, 9, 10120-10127. | 8.0 | 17 |
| 49 | Metal-organic chemical vapor deposition of N-polar InN quantum dots and thin films on vicinal GaN. Journal of Applied Physics, 2018, 123, . | 2.5 | 17 |
| 50 | Growth assessment of (002)-oriented AlN thin films on Ti bottom electrode deposited on silicon and kapton substrates. Materials and Design, 2017, 119, 151-158. | 7.0 | 16 |
| 51 | Structural and optical properties of molybdenum-tungsten mixed oxide thin films deposited by the sol-gel technique. Journal of Applied Physics, 2003, 93, 3816-3822. | 2.5 | 15 |
| 52 | Dependence of h-BN Film Thickness as Grown on Nickel Single-Crystal Substrates of Different Orientations. ACS Applied Materials & Interfaces, 2018, 10, 44862-44870. | 8.0 | 15 |
| 53 | A modeling and convolution method to measure compositional variations in strained alloy quantum dots. Ultramicroscopy, 2003, 94, 1-18. | 1.9 | 14 |
| 54 | Au nanoparticles decoration of silica nanowires for improved optical bio-sensing. Sensors and Actuators B: Chemical, 2016, 226, 589-597. | 7.8 | 14 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 55 | High- $\hat{\rho}$ Dielectric on ReS ₂ : In-Situ Thermal Versus Plasma-Enhanced Atomic Layer Deposition of Al ₂ O ₃ . <i>Materials</i> , 2019, 12, 1056. | 2.9 | 14 |
| 56 | Critical issues in the focused ion beam patterning of nanometric hole matrixes on GaAs based semiconducting devices. <i>Nanotechnology</i> , 2006, 17, 1758-1762. | 2.6 | 13 |
| 57 | Electrical and optical properties of ITO and ITO/Cr-doped ITO films. <i>Applied Physics A: Materials Science and Processing</i> , 2010, 101, 753-758. | 2.3 | 13 |
| 58 | Structural and morphological evolution of aluminum nitride thin films: Influence of additional energy to the sputtering process. <i>Journal of Physics and Chemistry of Solids</i> , 2013, 74, 1444-1451. | 4.0 | 13 |
| 59 | Engineering the interface chemistry for scandium electron contacts in WSe ₂ transistors and diodes. <i>2D Materials</i> , 2019, 6, 045020. | 4.4 | 13 |
| 60 | Structural characterization of lattice matched Al _x In _{1-x} As/InP and Ga _y In _{1-y} As/InP heterostructures by transmission electron microscopy and high-resolution x-ray diffraction. <i>Journal of Applied Physics</i> , 1995, 78, 2403-2410. | 2.5 | 12 |
| 61 | Influence of different V-grooved GaAs substrates on the geometrical shape of InGaAs/GaAs quantum wires. <i>Journal of Crystal Growth</i> , 1999, 197, 777-782. | 1.5 | 12 |
| 62 | Preparation and characterisation of organic-inorganic heterojunction based on BDA-PPV/CdS nanocrystals. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2000, 74, 175-179. | 3.5 | 12 |
| 63 | Direct bonding of copper and liquid crystal polymer. <i>Materials Letters</i> , 2018, 212, 214-217. | 2.6 | 11 |
| 64 | Structural characterization of ultrathin Cr-doped ITO layers deposited by double-target pulsed laser ablation. <i>Journal Physics D: Applied Physics</i> , 2011, 44, 365403. | 2.8 | 10 |
| 65 | Nanoscale compositional fluctuations in multiple InGaAs/GaAs quantum wires. <i>Journal of Applied Physics</i> , 2000, 87, 2261-2264. | 2.5 | 9 |
| 66 | Nanoscale Compositional Fluctuations in Single InGaAs/GaAs Quantum Dots. <i>Physica Status Solidi (B): Basic Research</i> , 2001, 224, 17-20. | 1.5 | 8 |
| 67 | Inter-level carrier dynamics and photocurrent generation in large band gap quantum dot solar cell by multistep growth. <i>Solar Energy Materials and Solar Cells</i> , 2017, 171, 142-147. | 6.2 | 8 |
| 68 | Structure and chemistry of Ag-Cu nanoclusters in a silica matrix by the sol-gel process. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 1997, 76, 621-628. | 0.6 | 7 |
| 69 | Electronic structure of double stacked InAs-GaAs quantum dots: Experiment and theory. <i>Journal of Applied Physics</i> , 2007, 102, 094314. | 2.5 | 7 |
| 70 | Optical Absorption Measurements at High Temperature (500 $\hat{\text{A}}^{\circ}\text{C}$) of Oxide Nanoparticles for Application as Gas-Based Nanofluid in Solar Thermal Collector Systems. <i>Advanced Materials Research</i> , 0, 773, 80-86. | 0.3 | 7 |
| 71 | Block Copolymer and Cellulose Templated Mesoporous TiO ₂ -SiO ₂ Nanocomposite as Superior Photocatalyst. <i>Catalysts</i> , 2022, 12, 770. | 3.5 | 7 |
| 72 | Correlation between shape and electronic states in nanostructures. <i>Micron</i> , 2000, 31, 245-251. | 2.2 | 6 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 73 | Optimization of electron beam induced deposition process for the fabrication of diode-like Pt/SiO ₂ /W devices. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2013, 31, 041805. | 1.2 | 5 |
| 74 | Dy- and Tb-doped CeO ₂ -Ni cermets for solid oxide fuel cell anodes: electrochemical fabrication, structural characterization, and electrocatalytic performance. <i>Journal of Solid State Electrochemistry</i> , 2018, 22, 3761-3773. | 2.5 | 5 |
| 75 | The effects of the focus ion beam milling process on the optical properties of semiconductor nanostructures. <i>Nanotechnology</i> , 2009, 20, 255306. | 2.6 | 4 |
| 76 | Morphological and compositional effects of FIB nanopatterning of multilayer metal/semiconducting devices. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2009, 41, 734-738. | 2.7 | 4 |
| 77 | Substrate-Au catalyst influence on the growth of ZnO nanorods. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2010, 172, 225-230. | 3.5 | 4 |
| 78 | Study of titania nanorod films deposited by matrix-assisted pulsed laser evaporation as a function of laser fluence. <i>Applied Physics A: Materials Science and Processing</i> , 2011, 105, 605-610. | 2.3 | 4 |
| 79 | Microstructural and Microanalytical Characterization of Pd Clusters in ORMOCER Matrix. <i>Microscopy Microanalysis Microstructures</i> , 1995, 6, 611-619. | 0.4 | 4 |
| 80 | Metal Nanocrystals in Amorphous Silica Matrix by the Sol-Gel Process. <i>Materials Science Forum</i> , 1996, 203, 59-64. | 0.3 | 3 |
| 81 | Time resolved screening of the piezoelectric field in InGaAs/GaAs V-shaped quantum wires of variable profile. <i>Journal of Physics Condensed Matter</i> , 1999, 11, 5989-5997. | 1.8 | 3 |
| 82 | Effects of coupling on the structural properties of In _x Ga _{1-x} As/GaAs 1-D and 0-D self-organized quantum structures. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2001, 87, 256-261. | 3.5 | 3 |
| 83 | Molybdenum-based nanostructured mixed oxides for sensing applications: Effect of the Mo oxide composition on the structure of sol-gel thin films. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2002, 20, 2433. | 1.6 | 3 |
| 84 | Structural, Morphological, and Chemical Properties of Cu/TiN Versus Cu Thin Layers for HEMT Backside Metallization. <i>IEEE Transactions on Device and Materials Reliability</i> , 2014, 14, 890-897. | 2.0 | 3 |
| 85 | Morphological and structural characterization of Sm ^{III} S compounds prepared by thermolysis of dithiocarbamate precursors. <i>Thin Solid Films</i> , 2014, 556, 241-246. | 1.8 | 3 |
| 86 | Physical insight in the fluence-dependent distributions of Au nanoparticles produced by sub-picosecond UV pulsed laser ablation of a solid target in vacuum environment. <i>Applied Surface Science</i> , 2019, 480, 330-340. | 6.1 | 3 |
| 87 | Recombination in InGaAs/GaAs quantum wire lasers. <i>Solid State Communications</i> , 1999, 112, 55-60. | 1.9 | 2 |
| 88 | Effects of quantum mechanical coupling on the optical properties of vertically stacked V-groove quantum wires. <i>Journal of Applied Physics</i> , 2000, 88, 772-776. | 2.5 | 2 |
| 89 | Optimization of Digital Growth of Thick N-Polar InGaN by MOCVD. <i>Journal of Electronic Materials</i> , 2020, 49, 3450-3454. | 2.2 | 2 |
| 90 | TEM Characterization of Palladium and Silver Nanoclusters in Glass Matrix. <i>Materials Science Forum</i> , 1995, 195, 87-92. | 0.3 | 1 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 91 | TEM characterization of single and multiple InGaAs/GaAs quantum wires grown by metal-organic vapor phase epitaxy on V-grooved substrates. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 1999, 67, 39-45. | 3.5 | 1 |
| 92 | Fabrication and characterization of strained InGaAs quantum wires grown on high index V-grooved GaAs substrates by LP-MOVPE. <i>Superlattices and Microstructures</i> , 1999, 25, 481-485. | 3.1 | 1 |
| 93 | Time-resolved magneto-optical properties of V-shaped single quantum wires. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2000, 7, 536-540. | 2.7 | 1 |
| 94 | Influence of the N ₂ /H ₂ ratio on the structural features of In _x Ga _{1-x} N/GaN films grown by MOCVD. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2001, 87, 237-243. | 3.5 | 1 |
| 95 | Luminescence Following Highly Localized Hole Carrier Injection into InGaAs Quantum Dots. <i>Japanese Journal of Applied Physics</i> , 2002, 41, 5127-5128. | 1.5 | 1 |
| 96 | High Spatial Resolution Energy Dispersive X-ray Spectroscopy and Atom Probe Tomography study of Indium segregation in N-polar InGaN Quantum Wells. <i>Microscopy and Microanalysis</i> , 2017, 23, 1448-1449. | 0.4 | 1 |
| 97 | InAs/AlGaAs quantum dots grown by a novel molecular beam epitaxy multistep design for intermediate band solar cells: physical insight into the structure, composition, strain and optical properties. <i>CrystEngComm</i> , 2019, 21, 4644-4652. | 2.6 | 1 |
| 98 | Scanning transmission electron microscopy determination of critical InAs QD parameters from high-quality focused ion beam lamellas. <i>Semiconductor Science and Technology</i> , 2009, 24, 085001. | 2.0 | 0 |
| 99 | Edge-melting: nanoscale key-mechanism to explain nanoparticle formation from heated TEM grids. <i>Applied Surface Science</i> , 2016, 365, 191-201. | 6.1 | 0 |