

Emilio Alarcon

List of Publications by Year in descending order

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Version: 2024-02-01

108
papers

3,335
citations

147726

31
h-index

161767

54
g-index

114
all docs

114
docs citations

114
times ranked

5057
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 1 | Bacterial biofilm formation on implantable devices and approaches to its treatment and prevention. <i>Heliyon</i> , 2018, 4, e01067. | 1.4 | 726 |
| 2 | The biocompatibility and antibacterial properties of collagen-stabilized, photochemically prepared silver nanoparticles. <i>Biomaterials</i> , 2012, 33, 4947-4956. | 5.7 | 200 |
| 3 | Mimicking biofilm formation and development: Recent progress in inÂvitro and inÂvivo biofilm models. <i>IScience</i> , 2021, 24, 102443. | 1.9 | 114 |
| 4 | Injectable human recombinant collagen matrices limit adverse remodeling and improve cardiac function after myocardial infarction. <i>Nature Communications</i> , 2019, 10, 4866. | 5.8 | 103 |
| 5 | Peptide-Based Functional Biomaterials for Soft-Tissue Repair. <i>Frontiers in Bioengineering and Biotechnology</i> , 2019, 7, 205. | 2.0 | 87 |
| 6 | Safety and efficacy of composite collagenâ€“silver nanoparticle hydrogels as tissue engineering scaffolds. <i>Nanoscale</i> , 2015, 7, 18789-18798. | 2.8 | 83 |
| 7 | Nanoengineered Electroconductive Collagen-Based Cardiac Patch for Infarcted Myocardium Repair. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 44668-44677. | 4.0 | 77 |
| 8 | Biomaterials-enabled cornea regeneration in patients at high risk for rejection of donor tissue transplantation. <i>Npj Regenerative Medicine</i> , 2018, 3, 2. | 2.5 | 76 |
| 9 | Coloured cornea replacements with anti-infective properties: expanding the safe use of silver nanoparticles in regenerative medicine. <i>Nanoscale</i> , 2016, 8, 6484-6489. | 2.8 | 74 |
| 10 | Gold nanoparticle catalysis of the cisâ€“trans isomerization of azobenzene. <i>Chemical Communications</i> , 2013, 49, 10073. | 2.2 | 73 |
| 11 | Surface Plasmons Control the Dynamics of Excited Triplet States in the Presence of Gold Nanoparticles. <i>Journal of the American Chemical Society</i> , 2010, 132, 6298-6299. | 6.6 | 68 |
| 12 | Photophysics and photochemistry of rose bengal bound to human serum albumin. <i>Photochemical and Photobiological Sciences</i> , 2009, 8, 933-943. | 1.6 | 63 |
| 13 | Photophysics and photochemistry of dyes bound to human serum albumin are determined by the dye localization. <i>Photochemical and Photobiological Sciences</i> , 2010, 9, 93-102. | 1.6 | 61 |
| 14 | Photophysical behaviour and photodynamic activity of zinc phthalocyanines associated to liposomes. <i>Photochemical and Photobiological Sciences</i> , 2011, 10, 507-514. | 1.6 | 60 |
| 15 | LL37 peptide@silver nanoparticles: combining the best of the two worlds for skin infection control. <i>Nanoscale</i> , 2014, 6, 5725-5728. | 2.8 | 60 |
| 16 | Functionalised type-I collagen as a hydrogel building block for bio-orthogonal tissue engineering applications. <i>Journal of Materials Chemistry B</i> , 2016, 4, 318-326. | 2.9 | 59 |
| 17 | Human serum albumin as protecting agent of silver nanoparticles: role of the protein conformation and amine groups in the nanoparticle stabilization. <i>Journal of Nanoparticle Research</i> , 2013, 15, 1. | 0.8 | 58 |
| 18 | Hollow core photonic crystal fiber for monitoring leukemia cells using surface enhanced Raman scattering (SERS). <i>Biomedical Optics Express</i> , 2015, 6, 4599. | 1.5 | 58 |

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|----|--|-----|-----------|
| 19 | New Insights into Peptide-Silver Nanoparticle Interaction: Deciphering the Role of Cysteine and Lysine in the Peptide Sequence. <i>Langmuir</i> , 2016, 32, 265-273. | 1.6 | 49 |
| 20 | Short peptide analogs as alternatives to collagen in pro-regenerative corneal implants. <i>Acta Biomaterialia</i> , 2018, 69, 120-130. | 4.1 | 48 |
| 21 | Photophysics and photochemistry of zinc phthalocyanine/bovine serum albumin adducts. <i>Photochemical and Photobiological Sciences</i> , 2009, 8, 255-263. | 1.6 | 46 |
| 22 | Multi-functional thermo-crosslinkable collagen-metal nanoparticle composites for tissue regeneration: nanosilver vs. nanogold. <i>RSC Advances</i> , 2017, 7, 47704-47708. | 1.7 | 45 |
| 23 | Nano-Engineered Biomaterials for Tissue Regeneration: What Has Been Achieved So Far?. <i>Frontiers in Materials</i> , 2016, 3, . | 1.2 | 44 |
| 24 | Rose Bengal Binding to Collagen and Tissue Photobonding. <i>ACS Omega</i> , 2017, 2, 6646-6657. | 1.6 | 41 |
| 25 | NIR excitation of upconversion nanohybrids containing a surface grafted Bodipy induces oxygen-mediated cancer cell death. <i>Journal of Materials Chemistry B</i> , 2014, 2, 4554-4563. | 2.9 | 40 |
| 26 | Optofluidic label-free SERS platform for rapid bacteria detection in serum. <i>Sensors and Actuators B: Chemical</i> , 2019, 300, 126907. | 4.0 | 40 |
| 27 | Association models for binding of molecules to nanostructures. <i>Analyst, The</i> , 2017, 142, 2067-2089. | 1.7 | 39 |
| 28 | Tuning plasmon transitions and their applications in organic photochemistry. <i>Pure and Applied Chemistry</i> , 2011, 83, 913-930. | 0.9 | 38 |
| 29 | Photodynamic performance of zinc phthalocyanine in HeLa cells: A comparison between DPCC liposomes and BSA as delivery systems. <i>Journal of Photochemistry and Photobiology B: Biology</i> , 2016, 163, 385-390. | 1.7 | 34 |
| 30 | Electroconductive nanoengineered biomimetic hybrid fibers for cardiac tissue engineering. <i>Journal of Materials Chemistry B</i> , 2017, 5, 2402-2406. | 2.9 | 34 |
| 31 | Electroconductive materials as biomimetic platforms for tissue regeneration. <i>Biotechnology Advances</i> , 2019, 37, 444-458. | 6.0 | 32 |
| 32 | Sprayable peptide-modified silver nanoparticles as a barrier against bacterial colonization. <i>Nanoscale</i> , 2016, 8, 19200-19203. | 2.8 | 30 |
| 33 | Deterministic Encapsulation of Human Cardiac Stem Cells in Variable Composition Nanoporous Gel Cocoons To Enhance Therapeutic Repair of Injured Myocardium. <i>ACS Nano</i> , 2018, 12, 4338-4350. | 7.3 | 28 |
| 34 | Regenerative approaches for the cornea. <i>Journal of Internal Medicine</i> , 2016, 280, 276-286. | 2.7 | 23 |
| 35 | Anti-Peroxy Radical Quality and Antibacterial Properties of Rooibos Infusions and Their Pure Glycosylated Polyphenolic Constituents. <i>Molecules</i> , 2013, 18, 11264-11280. | 1.7 | 22 |
| 36 | Collagen-Based Photoactive Agent for Tissue Bonding. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 9265-9270. | 4.0 | 22 |

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|----|---|-----|-----------|
| 37 | Stereoselective Interaction of Epimeric Naproxen-RGD Peptides with Human Serum Albumin. <i>Biomacromolecules</i> , 2010, 11, 2255-2260. | 2.6 | 21 |
| 38 | Effect of β -radiation on green onion DNA integrity: Role of ascorbic acid and polyphenols against nucleic acid damage. <i>Food Chemistry</i> , 2011, 128, 735-741. | 4.2 | 21 |
| 39 | Portable, miniaturized, fibre delivered, multimodal CARS exoscope. <i>Optics Express</i> , 2013, 21, 17161. | 1.7 | 20 |
| 40 | PET imaging of a collagen matrix reveals its effective injection and targeted retention in a mouse model of myocardial infarction. <i>Biomaterials</i> , 2015, 49, 18-26. | 5.7 | 20 |
| 41 | Chemiluminescence Associated with Singlet Oxygen Reactions with Amino Acids, Peptides and Proteins. <i>Photochemistry and Photobiology</i> , 2007, 83, 475-480. | 1.3 | 19 |
| 42 | Unexpected solvent isotope effect on the triplet lifetime of methylene blue associated to cucurbit[7]uril. <i>Photochemical and Photobiological Sciences</i> , 2012, 11, 269-273. | 1.6 | 18 |
| 43 | Impact of Dye-Protein Interaction and Silver Nanoparticles on Rose Bengal Photophysical Behavior and Protein Photocrosslinking. <i>Photochemistry and Photobiology</i> , 2013, 89, 1433-1441. | 1.3 | 18 |
| 44 | Photosensitizing Activity of Advanced Glycation Endproducts on Tryptophan, Glucose 6-phosphate Dehydrogenase, Human Serum Albumin and Ascorbic Acid Evaluated at Low Oxygen Pressure. <i>Photochemistry and Photobiology</i> , 2007, 83, 563-569. | 1.3 | 17 |
| 45 | Photochemical synthesis of biocompatible and antibacterial silver nanoparticles embedded within polyurethane polymers. <i>Photochemical and Photobiological Sciences</i> , 2015, 14, 661-664. | 1.6 | 16 |
| 46 | Multifunctional Nano and Collagen-Based Therapeutic Materials for Skin Repair. <i>ACS Biomaterials Science and Engineering</i> , 2020, 6, 1124-1134. | 2.6 | 16 |
| 47 | Deterministic paracrine repair of injured myocardium using microfluidic-based cocooning of heart explant-derived cells. <i>Biomaterials</i> , 2020, 247, 120010. | 5.7 | 16 |
| 48 | Biosynthetic alternatives for corneal transplant surgery. <i>Expert Review of Ophthalmology</i> , 2020, 15, 129-143. | 0.3 | 16 |
| 49 | Coumarin 314 Free Radical Cation: Formation, Properties, and Reactivity toward Phenolic Antioxidants. <i>Journal of Physical Chemistry A</i> , 2012, 116, 199-206. | 1.1 | 15 |
| 50 | A low cost and open access system for rapid synthesis of large volumes of gold and silver nanoparticles. <i>Scientific Reports</i> , 2021, 11, 5420. | 1.6 | 15 |
| 51 | Novel specific peptides as superior surface stabilizers for silver nano structures: role of peptide chain length. <i>Journal of Materials Chemistry B</i> , 2017, 5, 8925-8928. | 2.9 | 14 |
| 52 | Combined Methylglyoxal Scavenger and Collagen Hydrogel Therapy Prevents Adverse Remodeling and Improves Cardiac Function Post-Myocardial Infarction. <i>Advanced Functional Materials</i> , 2022, 32, 2108630. | 7.8 | 14 |
| 53 | Photophysical characterization of atorvastatin (Lipitor®) ortho-hydroxy metabolite: role of hydroxyl group on the drug photochemistry. <i>Photochemical and Photobiological Sciences</i> , 2010, 9, 1378. | 1.6 | 13 |
| 54 | Anti-microbiological and Anti-infective Activities of Silver. <i>Engineering Materials</i> , 2015, , 127-146. | 0.3 | 13 |

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|----|--|-----|-----------|
| 55 | Collagen-Based Microcapsules As Therapeutic Materials for Stem Cell Therapies in Infarcted Myocardium. <i>ACS Biomaterials Science and Engineering</i> , 2020, 6, 4614-4622. | 2.6 | 12 |
| 56 | Delivering More of an Injectable Human Recombinant Collagen III Hydrogel Does Not Improve Its Therapeutic Efficacy for Treating Myocardial Infarction. <i>ACS Biomaterials Science and Engineering</i> , 2020, 6, 4256-4265. | 2.6 | 12 |
| 57 | Spherical silver nanoparticles in the detection of thermally denatured collagens. <i>Analytical and Bioanalytical Chemistry</i> , 2016, 408, 1993-1996. | 1.9 | 11 |
| 58 | Lipoic acid capped silver nanoparticles: a facile route to covalent protein capping and oxidative stability within biological systems. <i>RSC Advances</i> , 2020, 10, 32953-32958. | 1.7 | 11 |
| 59 | Distribution of urocanic acid isomers between aqueous solutions and n-octanol, liposomes or bovine serum albumin. <i>Journal of Photochemistry and Photobiology B: Biology</i> , 2008, 90, 41-46. | 1.7 | 10 |
| 60 | Thermoplasmonic ssDNA Dynamic Release from Gold Nanoparticles Examined with Advanced Fluorescence Microscopy. <i>Journal of Physical Chemistry Letters</i> , 2015, 6, 1499-1503. | 2.1 | 10 |
| 61 | NANoPoLC algorithm for correcting nanoparticle concentration by sample polydispersity. <i>Nanoscale</i> , 2018, 10, 3166-3170. | 2.8 | 10 |
| 62 | Theoretical rationalisation of the photophysics of a TICT excited state of cinnamoyl coumarin derivatives in homogeneous and biological membrane models. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 27621-27629. | 1.3 | 10 |
| 63 | Triazine mediated covalent antibiotic grafting on cotton fabrics as a modular approach for developing antimicrobial barriers. <i>Cellulose</i> , 2019, 26, 7495-7505. | 2.4 | 10 |
| 64 | Biosupramolecular complexes of amphiphilic photosensitizers with human serum albumin and cucurbit[7]uril as carriers for photodynamic therapy. <i>Journal of Photochemistry and Photobiology B: Biology</i> , 2021, 223, 112284. | 1.7 | 10 |
| 65 | Nitroxide amide-BODIPY probe behavior in fibroblasts analyzed by advanced fluorescence microscopy. <i>Organic and Biomolecular Chemistry</i> , 2016, 14, 4023-4026. | 1.5 | 9 |
| 66 | Protein capped nanosilver free radical oxidation: role of biomolecule capping on nanoparticle colloidal stability and protein oxidation. <i>Chemical Communications</i> , 2018, 54, 4724-4727. | 2.2 | 9 |
| 67 | Atypical antioxidant activity of non-phenolic amino-coumarins. <i>RSC Advances</i> , 2018, 8, 1927-1933. | 1.7 | 9 |
| 68 | Nanoparticle Concentration vs Surface Area in the Interaction of Thiol-Containing Molecules: Toward a Rational Nanoarchitectural Design of Hybrid Materials. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 17697-17705. | 4.0 | 9 |
| 69 | BEaTS: an open access 3D printed device for in vitro electromechanical stimulation of human induced pluripotent stem cells. <i>Scientific Reports</i> , 2020, 10, 11274. | 1.6 | 9 |
| 70 | Recombinant Human Collagen Hydrogel Rapidly Reduces Methylglyoxal Adducts within Cardiomyocytes and Improves Borderzone Contractility after Myocardial Infarction in Mice. <i>Advanced Functional Materials</i> , 2022, 32, . | 7.8 | 9 |
| 71 | Riboflavin Surface Modification of Poly(vinyl chloride) for Light-Triggered Control of Bacterial Biofilm and Virus Inactivation. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 32251-32262. | 4.0 | 8 |
| 72 | Evaluation of Therapeutic Collagen-Based Biomaterials in the Infarcted Mouse Heart by Extracellular Matrix Targeted MALDI Imaging Mass Spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 2021, 32, 2746-2754. | 1.2 | 8 |

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|----|---|-----|-----------|
| 73 | Silica nanoreactors from silylated riboflavin for efficient singlet oxygen delivery. <i>Journal of Materials Chemistry B</i> , 2014, 2, 4221. | 2.9 | 7 |
| 74 | Reaction Kinetics of Phenolic Antioxidants toward Photoinduced Pyranine Free Radicals in Biological Models. <i>Journal of Physical Chemistry B</i> , 2017, 121, 6331-6340. | 1.2 | 7 |
| 75 | Light-Activated Peptide-Based Materials for Sutureless Wound Closure. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 45007-45015. | 4.0 | 7 |
| 76 | Integrated photothermal decontamination device for N95 respirators. <i>Scientific Reports</i> , 2021, 11, 1822. | 1.6 | 7 |
| 77 | Size-controlled photochemical synthesis of niobium nanoparticles. <i>Dalton Transactions</i> , 2013, 42, 14049. | 1.6 | 6 |
| 78 | Effect of nanosilver surfaces on peptide reactivity towards reactive oxygen species. <i>Nanoscale</i> , 2018, 10, 15911-15917. | 2.8 | 5 |
| 79 | 3D Bioprinted Cardiac Tissues and Devices for Tissue Maturation. <i>Cells Tissues Organs</i> , 2022, , 90-103. | 1.3 | 5 |
| 80 | Nanoengineered Sprayable Therapy for Treating Myocardial Infarction. <i>ACS Nano</i> , 2022, 16, 3522-3537. | 7.3 | 5 |
| 81 | Effect of temperature on the photobehavior of Rose Bengal associated with dipalmitoylphosphatidyl choline liposomes. <i>Journal of Luminescence</i> , 2011, 131, 2468-2472. | 1.5 | 4 |
| 82 | Optimizing the host substrate environment for cardiac angiogenesis, arteriogenesis, and myogenesis. <i>Expert Opinion on Biological Therapy</i> , 2017, 17, 435-447. | 1.4 | 4 |
| 83 | Antioxidant reactivity toward nitroxide probes anchored into human serum albumin. A new model for studying antioxidant repairing capacity of protein radicals. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2009, 19, 6382-6385. | 1.0 | 3 |
| 84 | Understanding the Interaction between Biomolecules and Silver Nanoparticles. <i>Biophysical Journal</i> , 2016, 110, 341a. | 0.2 | 3 |
| 85 | Fundamental concepts on surface chemistry of nanomaterials. , 2019, , 1-19. | | 3 |
| 86 | Molecular rotors as reporters for viscosity of solutions of collagen like peptides. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 24545-24549. | 1.3 | 3 |
| 87 | Biofilm Inhibition and Antiviral Response of Cold Sprayed and Shot Peened Copper Surfaces: Effect of Surface Morphology and Microstructure. <i>Journal of Thermal Spray Technology</i> , 2022, 31, 130-144. | 1.6 | 3 |
| 88 | Ketorolac beats ketoprofen: lower photodecarboxylation, photohemolysis and phototoxicity. <i>MedChemComm</i> , 2013, 4, 1619. | 3.5 | 2 |
| 89 | Nanoengineering the surface of corneal implants: towards functional anti-microbial and biofilm materials. <i>RSC Advances</i> , 2020, 10, 23675-23681. | 1.7 | 2 |
| 90 | Building new cardiac vasculature and myocardium: where are we at?. <i>Current Opinion in Cardiology</i> , 2021, 36, 728-734. | 0.8 | 2 |

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| 91 | EFFECT OF THE INCORPORATION INTO UNILAMINAR VESICLE ON THE PHOTODEGRADATION OF INDOLES SENSITIZED BY FLAVINS. Journal of the Chilean Chemical Society, 2013, 58, 2106-2109. | 0.5 | 1 |
| 92 | Mapping Interactions between Silver Nanoparticles and Biomolecules at the Atomic Level. Biophysical Journal, 2015, 108, 633a. | 0.2 | 1 |
| 93 | Editorial: Functionalization at Nanoscale to Enhance Specific Biological Activities. Frontiers in Bioengineering and Biotechnology, 2019, 7, 178. | 2.0 | 1 |
| 94 | Bioengineered Corneas Entering the Clinical Realm. Reference Series in Biomedical Engineering, 2021, , 557-587. | 0.1 | 1 |
| 95 | Enhanced Antibacterial Properties of Copper Surfaces Using Cold Spray Shot Peening. , 2021, , . | | 1 |
| 96 | Biomaterials for Organ and Tissue Repair. Frontiers for Young Minds, 0, 7, . | 0.8 | 1 |
| 97 | Closing Wounds With Light?. Frontiers for Young Minds, 0, 8, . | 0.8 | 1 |
| 98 | Correction: Functionalised type-I collagen as a hydrogel building block for bio-orthogonal tissue engineering applications. Journal of Materials Chemistry B, 2017, 5, 5284-5284. | 2.9 | 0 |
| 99 | CLK-Peptides as Superior Surface Stabilizers for Silver Nano Structures: Role of Peptide Chain Length and Applications in Nanomedicine. Biophysical Journal, 2018, 114, 543a. | 0.2 | 0 |
| 100 | Combined methylglyoxal scavenger and collagen hydrogel therapy improves function of the infarcted heart. Journal of Molecular and Cellular Cardiology, 2018, 124, 84. | 0.9 | 0 |
| 101 | Injection of a recombinant human collagen hydrogel improves cardiac function and reduces pathological remodeling post myocardial infarction. Journal of Molecular and Cellular Cardiology, 2018, 124, 104. | 0.9 | 0 |
| 102 | Cornea Regeneration as an Alternative to Human Donor Transplantation. European Ophthalmic Review, 2015, 09, 111. | 0.3 | 0 |
| 103 | Biomolecule Silver Nanoparticle-Based Materials for Biomedical Applications. , 2018, , 1-17. | | 0 |
| 104 | Recent advances in the design of light-activated tissue repair. Photochemistry, 2018, , 265-280. | 0.2 | 0 |
| 105 | Biomolecule Silver Nanoparticle-Based Materials for Biomedical Applications. , 2019, , 3485-3501. | | 0 |
| 106 | Regulatory Normative of Nanomaterials for Their Use in Biomedicine. , 2019, , 195-208. | | 0 |
| 107 | Nanomaterials for Its Use in Biomedicine: An Overview. , 2019, , 1-11. | | 0 |
| 108 | Bioengineered Corneas Entering the Clinical Realm. , 2020, , 1-31. | | 0 |