

Isabel Izquierdo-Barba

List of Publications by Year in descending order

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111
papers

7,524
citations

41344
49
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56724
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112
all docs

112
docs citations

112
times ranked

7324
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 1 | Mesoporous SBA-15 HPLC evaluation for controlled gentamicin drug delivery. Journal of Controlled Release, 2004, 97, 125-132. | 9.9 | 350 |
| 2 | Mesoporous Silica Nanoparticles for Drug Delivery: Current Insights. Molecules, 2018, 23, 47. | 3.8 | 338 |
| 3 | Ordered Mesoporous Bioactive Glasses for Bone Tissue Regeneration. Chemistry of Materials, 2006, 18, 3137-3144. | 6.7 | 333 |
| 4 | Revisiting silica based ordered mesoporous materials: medical applications. Journal of Materials Chemistry, 2006, 16, 26-31. | 6.7 | 308 |
| 5 | Functionalization of mesoporous materials with long alkyl chains as a strategy for controlling drug delivery pattern. Journal of Materials Chemistry, 2006, 16, 462-466. | 6.7 | 302 |
| 6 | Bioactivity of a CaO-SiO ₂ Binary Glasses System. Chemistry of Materials, 2000, 12, 3080-3088. | 6.7 | 214 |
| 7 | Release evaluation of drugs from ordered three-dimensional silica structures. European Journal of Pharmaceutical Sciences, 2005, 26, 365-373. | 4.0 | 200 |
| 8 | Tissue regeneration: A new property of mesoporous materials. Solid State Sciences, 2005, 7, 983-989. | 3.2 | 186 |
| 9 | Hexagonal ordered mesoporous material as a matrix for the controlled release of amoxicillin. Solid State Ionics, 2004, 172, 435-439. | 2.7 | 180 |
| 10 | Structure and functionalization of mesoporous bioceramics for bone tissue regeneration and local drug delivery. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2012, 370, 1400-1421. | 3.4 | 156 |
| 11 | Aerosol-Assisted Synthesis of Magnetic Mesoporous Silica Spheres for Drug Targeting. Chemistry of Materials, 2007, 19, 3455-3463. | 6.7 | 149 |
| 12 | Influence of mesoporous structure type on the controlled delivery of drugs: release of ibuprofen from MCM-48, SBA-15 and functionalized SBA-15. Journal of Sol-Gel Science and Technology, 2009, 50, 421-429. | 2.4 | 136 |
| 13 | Long term degradation of poly(ϵ -caprolactone) films in biologically related fluids. Polymer Degradation and Stability, 2006, 91, 1424-1432. | 5.8 | 134 |
| 14 | Nanomaterials as Promising Alternative in the Infection Treatment. International Journal of Molecular Sciences, 2019, 20, 3806. | 4.1 | 128 |
| 15 | High-Performance Mesoporous Bioceramics Mimicking Bone Mineralization. Chemistry of Materials, 2008, 20, 3191-3198. | 6.7 | 126 |
| 16 | Multinuclear Solid-State NMR Studies of Ordered Mesoporous Bioactive Glasses. Journal of Physical Chemistry C, 2008, 112, 5552-5562. | 3.1 | 125 |
| 17 | Advances in mesoporous silica nanoparticles for targeted stimuli-responsive drug delivery: an update. Expert Opinion on Drug Delivery, 2019, 16, 415-439. | 5.0 | 124 |
| 18 | In vitro calcium phosphate layer formation on sol-gel glasses of the CaO-SiO ₂ system. , 1999, 47, 243-250. | | 115 |

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|----|--|------|-----------|
| 19 | Incorporation of antimicrobial compounds in mesoporous silica film monolith. <i>Biomaterials</i> , 2009, 30, 5729-5736. | 11.4 | 112 |
| 20 | Influence of P2O5 on crystallinity of apatite formed in vitro on surface of bioactive glasses. , 1999, 46, 560-565. | | 105 |
| 21 | Essential Role of Calcium Phosphate Heterogeneities in 2D-Hexagonal and 3D-Cubic SiO ₂ ·xH ₂ O/CaO·P ₂ O ₅ Mesoporous Bioactive Glasses. <i>Chemistry of Materials</i> , 2009, 21, 5474-5484. | 6.7 | 95 |
| 22 | Synthesis and Characterization of Zwitterionic SBA-15 Nanostructured Materials. <i>Chemistry of Materials</i> , 2010, 22, 6459-6466. | 6.7 | 94 |
| 23 | Preparation of 3-D scaffolds in the SiO ₂ -P ₂ O ₅ system with tailored hierarchical meso-macroporosity. <i>Acta Biomaterialia</i> , 2011, 7, 1265-1273. | 8.3 | 94 |
| 24 | Mesoporous silica nanoparticles decorated with polycationic dendrimers for infection treatment. <i>Acta Biomaterialia</i> , 2018, 68, 261-271. | 8.3 | 92 |
| 25 | Tuning mesoporous silica dissolution in physiological environments: a review. <i>Journal of Materials Science</i> , 2017, 52, 8761-8771. | 3.7 | 87 |
| 26 | Advanced Drug Delivery Vectors with Tailored Surface Properties Made of Mesoporous Binary Oxides Submicronic Spheres. <i>Chemistry of Materials</i> , 2010, 22, 1821-1830. | 6.7 | 85 |
| 27 | Nanocolumnar coatings with selective behavior towards osteoblast and <i>Staphylococcus aureus</i> proliferation. <i>Acta Biomaterialia</i> , 2015, 15, 20-28. | 8.3 | 85 |
| 28 | Biomimetic Apatite Deposition on Calcium Silicate Gel Glasses. <i>Journal of Sol-Gel Science and Technology</i> , 2001, 21, 13-25. | 2.4 | 82 |
| 29 | In vitro structural changes in porous HA/β-TCP scaffolds in simulated body fluid. <i>Acta Biomaterialia</i> , 2009, 5, 2738-2751. | 8.3 | 82 |
| 30 | Biomimetic Apatite Mineralization Mechanisms of Mesoporous Bioactive Glasses as Probed by Multinuclear ³¹ P, ²⁹ Si, ²³ Na and ¹³ C Solid-State NMR. <i>Journal of Physical Chemistry C</i> , 2010, 114, 19345-19356. | 3.1 | 79 |
| 31 | Phosphorous-doped MCM-41 as bioactive material. <i>Solid State Sciences</i> , 2005, 7, 233-237. | 3.2 | 78 |
| 32 | Biomaterials against Bone Infection. <i>Advanced Healthcare Materials</i> , 2020, 9, e2000310. | 7.6 | 75 |
| 33 | In vitro stability of SBA-15 under physiological conditions. <i>Microporous and Mesoporous Materials</i> , 2010, 132, 442-452. | 4.4 | 73 |
| 34 | Compositional Variations in the Calcium Phosphate Layer Growth on Gel Glasses Soaked in a Simulated Body Fluid. <i>Chemistry of Materials</i> , 2000, 12, 3770-3775. | 6.7 | 71 |
| 35 | Bioactive Glasses: From Macro to Nano. <i>International Journal of Applied Glass Science</i> , 2013, 4, 149-161. | 2.0 | 71 |
| 36 | Solid-State ³¹ P and ¹ H NMR Investigations of Amorphous and Crystalline Calcium Phosphates Grown Biomimetically From a Mesoporous Bioactive Glass. <i>Journal of Physical Chemistry C</i> , 2011, 115, 20572-20582. | 3.1 | 69 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 37 | Multifunctional pH sensitive 3D scaffolds for treatment and prevention of bone infection. Acta Biomaterialia, 2018, 65, 450-461. | 8.3 | 68 |
| 38 | High Specific Surface Area in Nanometric Carbonated Hydroxyapatite. Chemistry of Materials, 2008, 20, 5942-5944. | 6.7 | 66 |
| 39 | Promising trends of bioceramics in the biomaterials field. Journal of Materials Science: Materials in Medicine, 2009, 20, 447-455. | 3.6 | 65 |
| 40 | 3D scaffold with effective multidrug sequential release against bacteria biofilm. Acta Biomaterialia, 2017, 49, 113-126. | 8.3 | 65 |
| 41 | Nanostructured Mesoporous Silicas for Bone Tissue Regeneration. Journal of Nanomaterials, 2008, 2008, 1-14. | 2.7 | 64 |
| 42 | Mixed-charge pseudo-zwitterionic mesoporous silica nanoparticles with low-fouling and reduced cell uptake properties. Acta Biomaterialia, 2019, 84, 317-327. | 8.3 | 63 |
| 43 | Inhibition of bacterial adhesion on biocompatible zwitterionic SBA-15 mesoporous materials. Acta Biomaterialia, 2011, 7, 2977-2985. | 8.3 | 62 |
| 44 | Direct Probing of the Phosphate-Ion Distribution in Bioactive Silicate Glasses by Solid-State NMR: Evidence for Transitions between Random/Clustered Scenarios. Chemistry of Materials, 2013, 25, 1877-1885. | 6.7 | 62 |
| 45 | Synergistic effect of Si-hydroxyapatite coating and VEGF adsorption on Ti6Al4V-ELI scaffolds for bone regeneration in an osteoporotic bone environment. Acta Biomaterialia, 2019, 83, 456-466. | 8.3 | 62 |
| 46 | Effect of the continuous solution exchange on their in vitro reactivity of a CaO-SiO ₂ sol-gel glass. , 2000, 51, 191-199. | | 60 |
| 47 | Mesoporous bioactive glasses: Relevance of their porous structure compared to that of classical bioglasses. Biomedical Glasses, 2015, 1, . | 2.4 | 58 |
| 48 | In vitro Evaluation of Potential Calcium Phosphate Scaffolds for Tissue Engineering. Tissue Engineering, 2006, 12, 279-290. | 4.6 | 55 |
| 49 | Concanavalin A-targeted mesoporous silica nanoparticles for infection treatment. Acta Biomaterialia, 2019, 96, 547-556. | 8.3 | 55 |
| 50 | Calcium phosphate-based particles influence osteogenic maturation of human mesenchymal stem cells. Acta Biomaterialia, 2009, 5, 1294-1305. | 8.3 | 53 |
| 51 | Incorporation of Phosphorus into Mesostructured Silicas: A Novel Approach to Reduce the SiO ₂ Leaching in Water. Chemistry of Materials, 2009, 21, 4135-4145. | 6.7 | 53 |
| 52 | Zwitterionic ceramics for biomedical applications. Acta Biomaterialia, 2016, 40, 201-211. | 8.3 | 51 |
| 53 | A biocompatible calcium bisphosphonate coordination polymer: towards a metal-linker synergistic therapeutic effect?. CrystEngComm, 2013, 15, 9899. | 2.6 | 49 |
| 54 | Local structures of mesoporous bioactive glasses and their surface alterations <i>in vitro</i> : inferences from solid-state nuclear magnetic resonance. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2012, 370, 1376-1399. | 3.4 | 48 |

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|----|---|------|-----------|
| 55 | Biocompatibility and levofloxacin delivery of mesoporous materials. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2013, 84, 115-124. | 4.3 | 45 |
| 56 | Bioactive Carbonate-Hydroxyapatite Coatings Deposited onto Ti6Al4V Substrate. <i>Chemistry of Materials</i> , 2004, 16, 1451-1455. | 6.7 | 43 |
| 57 | Novel biopolymer-coated hydroxyapatite foams for removing heavy-metals from polluted water. <i>Journal of Hazardous Materials</i> , 2011, 192, 71-7. | 12.4 | 43 |
| 58 | Novel biomaterials for drug delivery. <i>Expert Opinion on Therapeutic Patents</i> , 2008, 18, 639-656. | 5.0 | 42 |
| 59 | Design and preparation of biocompatible zwitterionic hydroxyapatite. <i>Journal of Materials Chemistry B</i> , 2013, 1, 1595. | 5.8 | 40 |
| 60 | New method to obtain chitosan/apatite materials at room temperature. <i>Solid State Sciences</i> , 2006, 8, 513-519. | 3.2 | 37 |
| 61 | Alkaline-treated poly(μ -caprolactone) films: Degradation in the presence or absence of fibroblasts. <i>Journal of Biomedical Materials Research - Part A</i> , 2006, 76A, 788-797. | 4.0 | 37 |
| 62 | Bacteria as Nanoparticles Carrier for Enhancing Penetration in a Tumoral Matrix Model. <i>Advanced Materials Interfaces</i> , 2020, 7, 1901942. | 3.7 | 37 |
| 63 | Proton Environments in Biomimetic Calcium Phosphates Formed from Mesoporous Bioactive $\text{CaO-SiO}_2\text{-P}_2\text{O}_5$ Glasses <i>in Vitro</i> : Insights from Solid-State NMR. <i>Journal of Physical Chemistry C</i> , 2017, 121, 13223-13238. | 3.1 | 36 |
| 64 | Vitreous $\text{SiO}_2\text{-CaO}$ coatings on Ti6Al4V alloys: Reactivity in simulated body fluid versus osteoblast cell culture. <i>Acta Biomaterialia</i> , 2006, 2, 445-455. | 8.3 | 35 |
| 65 | Phosphorus-containing SBA-15 materials as bisphosphonate carriers for osteoporosis treatment. <i>Microporous and Mesoporous Materials</i> , 2010, 135, 51-59. | 4.4 | 35 |
| 66 | Biotinylation of silicon-doped hydroxyapatite: A new approach to protein fixation for bone tissue regeneration. <i>Acta Biomaterialia</i> , 2010, 6, 743-749. | 8.3 | 35 |
| 67 | New Nanocomposite System with Nanocrystalline Apatite Embedded into Mesoporous Bioactive Glass. <i>Chemistry of Materials</i> , 2012, 24, 1100-1106. | 6.7 | 35 |
| 68 | Tailoring hierarchical meso-macroporous 3D scaffolds: from nano to macro. <i>Journal of Materials Chemistry B</i> , 2014, 2, 49-58. | 5.8 | 35 |
| 69 | Zinc oxide nanocrystals as a nanoantibiotic and osteoinductive agent. <i>RSC Advances</i> , 2019, 9, 11312-11321. | 3.6 | 34 |
| 70 | Room temperature synthesis of chitosan/apatite powders and coatings. <i>Journal of the European Ceramic Society</i> , 2006, 26, 3631-3638. | 5.7 | 32 |
| 71 | Quantifying apatite formation and cation leaching from mesoporous bioactive glasses in vitro: a SEM, solid-state NMR and powder XRD study. <i>Journal of Materials Chemistry</i> , 2012, 22, 7214. | 6.7 | 32 |
| 72 | Crystallochemistry, textural properties, and in vitro biocompatibility of different silicon-doped calcium phosphates. <i>Journal of Biomedical Materials Research - Part A</i> , 2006, 78A, 762-771. | 4.0 | 31 |

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|----|--|----------|-----------|
| 73 | Surface Reactions of Mesoporous Bioactive Glasses Monitored by Solid-State NMR: Concentration Effects in Simulated Body Fluid. <i>Journal of Physical Chemistry C</i> , 2016, 120, 4961-4974. | 3.1 | 31 |
| 74 | Mesostructured silica based delivery system for a drug with a peptide as a cell-penetrating vector. <i>Microporous and Mesoporous Materials</i> , 2009, 122, 201-207. | 4.4 | 30 |
| 75 | Antibacterial Nanostructured Ti Coatings by Magnetron Sputtering: From Laboratory Scales to Industrial Reactors. <i>Nanomaterials</i> , 2019, 9, 1217. | 4.1 | 30 |
| 76 | Using Aptamerâ€“Nanoparticle Conjugates for Cancer Cells Detection. <i>Journal of Biomedical Nanotechnology</i> , 2008, 4, 400-409. | 1.1 | 29 |
| 77 | Biological performance of hydroxyapatiteâ€“biopolymer foams: In vitro cell response. <i>Acta Biomaterialia</i> , 2012, 8, 802-810. | 8.3 | 29 |
| 78 | Tailoring the biological response of mesoporous bioactive materials. <i>Journal of Materials Chemistry B</i> , 2015, 3, 3810-3819. | 5.8 | 28 |
| 79 | Localized corrosion of 316L stainless steel with SiO ₂ -CaO films obtained by means of sol-gel treatment. <i>Journal of Biomedical Materials Research - Part A</i> , 2003, 67A, 674-678. | 4.0 | 26 |
| 80 | Biopolymer-coated hydroxyapatite foams: a new antidote for heavy metal intoxication. <i>Journal of Materials Chemistry</i> , 2010, 20, 6956. | 6.7 | 26 |
| 81 | Fascinating properties of bioactive templated glasses: A new generation of nanostructured bioceramics. <i>Solid State Sciences</i> , 2011, 13, 773-783. | 3.2 | 25 |
| 82 | Composition-dependent in vitro apatite formation at mesoporous bioactive glass-surfaces quantified by solid-state NMR and powder XRD. <i>RSC Advances</i> , 2015, 5, 86061-86071. | 3.6 | 25 |
| 83 | The Role of Zwitterionic Materials in the Fight against Proteins and Bacteria. <i>Medicines (Basel)</i> , 2021, 10, 148. | 0.784314 | 10 |
| 84 | Lysine-Grafted MCM-41 Silica as an Antibacterial Biomaterial. <i>Bioengineering</i> , 2017, 4, 80. | 3.5 | 22 |
| 85 | Strontium-releasing mesoporous bioactive glasses with anti-adhesive zwitterionic surface as advanced biomaterials for bone tissue regeneration. <i>Journal of Colloid and Interface Science</i> , 2020, 563, 92-103. | 9.4 | 22 |
| 86 | Effective reduction of biofilm through photothermal therapy by gold core@shell based mesoporous silica nanoparticles. <i>Microporous and Mesoporous Materials</i> , 2021, 328, 111489. | 4.4 | 22 |
| 87 | Carbon nanotubesâ€“mesoporous silica composites as controllable biomaterials. <i>Journal of Materials Chemistry</i> , 2009, 19, 7745. | 6.7 | 21 |
| 88 | In vitro colonization of stratified bioactive scaffolds by pre-osteoblast cells. <i>Acta Biomaterialia</i> , 2016, 44, 73-84. | 8.3 | 20 |
| 89 | Impact of the antibiotic-cargo from MSNs on gram-positive and gram-negative bacterial biofilms. <i>Microporous and Mesoporous Materials</i> , 2021, 311, 110681. | 4.4 | 20 |
| 90 | The Role of Precursor Concentration on the Characteristics of SiO ₂ -CaO Films. <i>Journal of Sol-Gel Science and Technology</i> , 2003, 26, 1179-1182. | 2.4 | 19 |

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| 91 | SiO ₂ -CaO Vitreous Films Deposited onto Ti6Al4V Substrates. European Journal of Inorganic Chemistry, 2003, 2003, 1608-1613. | 2.0 | 19 |
| 92 | Nanocrystalline bioactive apatite coatings. Solid State Sciences, 2006, 8, 685-691. | 3.2 | 19 |
| 93 | Superparamagnetic Iron Oxide Nanoparticles Decorated Mesoporous Silica Nanosystem for Combined Antibiofilm Therapy. Pharmaceutics, 2022, 14, 163. | 4.5 | 19 |
| 94 | Textural properties of CaO/SiO ₂ glasses for use in implants. Solid State Ionics, 2004, 172, 441-444. | 2.7 | 17 |
| 95 | Surface zwitterionization of customized 3D Ti6Al4V scaffolds: a promising alternative to eradicate bone infection. Journal of Materials Chemistry B, 2016, 4, 4356-4365. | 5.8 | 16 |
| 96 | Preventing bacterial adhesion on scaffolds for bone tissue engineering. International Journal of Bioprinting, 2016, 2, . | 3.4 | 16 |
| 97 | Incorporation of Superparamagnetic Iron Oxide Nanoparticles into Collagen Formulation for 3D Electrospun Scaffolds. Nanomaterials, 2022, 12, 181. | 4.1 | 15 |
| 98 | Silica-Based Ordered Mesoporous Materials for Biomedical Applications. Key Engineering Materials, 2008, 377, 133-150. | 0.4 | 14 |
| 99 | Effects of 3D nanocomposite bioceramic scaffolds on the immune response. Journal of Materials Chemistry B, 2014, 2, 3469. | 5.8 | 14 |
| 100 | A versatile multicomponent mesoporous silica nanosystem with dual antimicrobial and osteogenic effects. Acta Biomaterialia, 2021, 136, 570-581. | 8.3 | 13 |
| 101 | Nanoantibiotics Based in Mesoporous Silica Nanoparticles: New Formulations for Bacterial Infection Treatment. Pharmaceutics, 2021, 13, 2033. | 4.5 | 11 |
| 102 | Synthesis of β -tricalcium phosphate in layered or powdered forms for biomedical applications. Solid State Ionics, 2004, 172, 445-449. | 2.7 | 9 |
| 103 | Bimodal meso/macro porous hydroxyapatite coatings. Journal of Sol-Gel Science and Technology, 2011, 57, 109-113. | 2.4 | 9 |
| 104 | Drug Delivery and Bone Infection. The Enzymes, 2018, 44, 35-59. | 1.7 | 7 |
| 105 | Effects of bleaching on osteoclast activity and their modulation by osteostatin and fibroblast growth factor 2. Journal of Colloid and Interface Science, 2016, 461, 285-291. | 9.4 | 5 |
| 106 | New approach to determine the morphological and structural changes in the enamel as consequence of dental bleaching. Materials Letters, 2015, 141, 302-306. | 2.6 | 4 |
| 107 | Apatite Layers by a Sol-Gel Route. Key Engineering Materials, 2004, 254-256, 363-366. | 0.4 | 2 |
| 108 | Calcium Phosphate Porous Coatings onto Alumina Substrates by Liquid Mix Method. Key Engineering Materials, 0, 254-256, 359-362. | 0.4 | 1 |

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|-----|--|-----|-----------|
| 109 | Nanocarriers Tumor Penetration: Bacteria as Nanoparticles Carrier for Enhancing Penetration in a Tumoral Matrix Model (Adv. Mater. Interfaces 11/2020). Advanced Materials Interfaces, 2020, 7, 2070063. | 3.7 | 1 |
| 110 | Amine-Functionalized Mesoporous Silica Nanoparticles: A New Nanoantibiotic for Bone Infection Treatment. Biomedical Glasses, 2017, 3, . | 2.4 | 1 |
| 111 | Commemorative Issue in Honor of Professor MarÃa Vallet RegÃ: 20 Years of Silica-Based Mesoporous Materials. Pharmaceutics, 2022, 14, 125. | 4.5 | 0 |