# Jean-Michel Bouler

List of Publications by Year
in descending order



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|---|---|---|---|
| 107 papers | 5,403 citations | 87843 38 h-index | 88593 70 g-index |
| 110 all docs | 110 docs citations | 110 times ranked | 5043 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Macroporous biphasic calcium phosphate ceramics: influence of macropore diameter and macroporosity percentage on bone ingrowth. Biomaterials, 1998, 19, 133-139. | 5.7 | 587 |
| 2 | Calcium phosphate cements for bone substitution: Chemistry, handling and mechanical properties. Acta Biomaterialia, 2014, 10, 1035-1049. | 4.1 | 535 |
| 3 | Calcium phosphate drug delivery system: influence of local zoledronate release on bone implant osteointegration. Bone, 2005, 36, 52-60. | 1.4 | 250 |
| 4 | Calcium phosphate biomaterials as bone drug delivery systems: a review. Drug Discovery Today, 2010, 15, 547-552. | 3.2 | 184 |
| 5 | In vivo bone regeneration with injectable calcium phosphate biomaterial: A three-dimensional micro-computed tomographic, biomechanical and SEM study. Biomaterials, 2005, 26, 5444-5453. | 5.7 | 175 |
| 6 | Adaptive Crystal Formation in Normal and Pathological Calcifications in Synthetic Calcium Phosphate and Related Biomaterials. International Review of Cytology, 1997, 172, 129-191. | 6.2 | 166 |
| 7 | Macroporous biphasic calcium phosphate ceramics: Influence of five synthesis parameters on compressive strength. Journal of Biomedical Materials Research Part B, 1996, 32, 603-609. | 3.0 | 165 |
| 8 | Local delivery of bisphosphonate from coated orthopedic implants increases implants mechanical stability in osteoporotic rats. Journal of Biomedical Materials Research - Part A, 2006, 76A, 133-143. | 2.1 | 153 |
| 9 | Novel biomaterials for bisphosphonate delivery. Biomaterials, 2005, 26, 2073-2080. | 5.7 | 143 |
| 10 | Kinetic study of bone ingrowth and ceramic resorption associated with the implantation of different injectable calcium-phosphate bone substitutes. , 1999, 47, 28-35. | | 138 |
| 11 | Biphasic calcium phosphates: Influence of three synthesis parameters on the HA/?-TCP ratio. Journal of Biomedical Materials Research Part B, 2000, 51, 680-684. | 3.0 | 133 |
| 12 | Biphasic calcium phosphate/hydrosoluble polymer composites: a new concept for bone and dental substitution biomaterials. Bone, 1999, 25, 59S-61S. | 1.4 | 120 |
| 13 | Effects of pH and Ca/P molar ratio on the quantity and crystalline structure of calcium phosphates obtained from aqueous solutions. Dairy Science and Technology, 2009, 89, 301-316. | 2.2 | 111 |
| 14 | Human Primary Osteocyte Differentiation in a 3D Culture System. Journal of Bone and Mineral Research, 2009, 24, 1927-1935. | 3.1 | 103 |
| 15 | Osteoclastic resorption of biphasic calcium phosphate ceramicin vitro. , 1997, 37, 346-352. | | 88 |
| 16 | Implants delivering bisphosphonate locally increase periprosthetic bone density in an osteoporotic sheep model. A pilot study. , 2008, 16, 10-16. | | 88 |
| 17 | Elaboration conditions influence physicochemical properties and in vivo bioactivity of macroporous biphasic calcium phosphate ceramics. Journal of Materials Science: Materials in Medicine, 1999, 10, 199-204. | 1.7 | 86 |
| 18 | A New Injectable Calcium Phosphate Biomaterial for Immediate Bone Filling of Extraction Sockets: A Preliminary Study in Dogs. Journal of Periodontology, 1999, 70, 375-383. | 1.7 | 85 |

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|---|---|---|---|
| 19 | Modelling the mechanical properties of microporous and macroporous biphasic calcium phosphate bioceramics. Journal of the European Ceramic Society, 2006, 26, 3647-3656. | 2.8 | 83 |
| 20 | Macroporous biphasic calcium phosphate ceramics versus injectable bone substitute: a comparative study 3 and 8 weeks after implantation in rabbit bone. Journal of Materials Science: Materials in Medicine, 2001, 12, 385-390. | 1.7 | 82 |
| 21 | In vivo bone augmentation in an osteoporotic environment using bisphosphonate-loaded calcium deficient apatite. Biomaterials, 2010, 31, 7776-7784. | 5.7 | 80 |
| 22 | A simple and effective approach to prepare injectable macroporous calcium phosphate cement for bone repair: Syringe-foaming using a viscous hydrophilic polymeric solution. Acta Biomaterialia, 2016, 31, 326-338. | 4.1 | 76 |
| 23 | Injectable bone substitute using a hydrophilic polymer. Bone, 1999, 25, 67S-70S. | 1.4 | 74 |
| 24 | Short-term effects of mineral particle sizes on cellular degradation activity after implantation of injectable calcium phosphate biomaterials and the consequences for bone substitution. Bone, 1999, 25, 71S-74S. | 1.4 | 72 |
| 25 | A novel injectable, cohesive and toughened Si-HPMC (silanized-hydroxypropyl methylcellulose) composite calcium phosphate cement for bone substitution. Acta Biomaterialia, 2014, 10, 3335-3345. | 4.1 | 71 |
| 26 | Calcium-deficient apatite: A firstin vivo study concerning bone ingrowth. Journal of Biomedical Materials Research Part B, 2003, 65A, 402-408. | 3.0 | 70 |
| 27 | Gallium modulates osteoclastic bone resorption in vitro without affecting osteoblasts. British Journal of Pharmacology, 2010, 159, 1681-1692. | 2.7 | 69 |
| 28 | Chemically Modified Calcium Phosphates as Novel Materials for Bisphosphonate Delivery. Advanced Materials, 2004, 16, 1423-1427. | 11.1 | 63 |
| 29 | Structural and spectroscopic characterization of a series of potassium- and/or sodium-substituted Î²-tricalcium phosphate. Acta Biomaterialia, 2011, 7, 1844-1852. | 4.1 | 63 |
| 30 | The influence of different cellulose ethers on both the handling and mechanical properties of calcium phosphate cements for bone substitution. Acta Biomaterialia, 2013, 9, 5740-5750. | 4.1 | 63 |
| 31 | Calcium phosphate scaffold and bone marrow for bone reconstruction in irradiated area: a dog study. Bone, 2005, 36, 323-330. | 1.4 | 60 |
| 32 | Effect of Sodium Doping in Î²-Tricalcium Phosphate on Its Structure and Properties. Chemistry of Materials, 2006, 18, 1425-1433. | 3.2 | 60 |
| 33 | Characterization and Properties of Novel Gallium-Doped Calcium Phosphate Ceramics. Inorganic Chemistry, 2011, 50, 8252-8260. | 1.9 | 60 |
| 34 | Reaction of Zoledronate with Î²-Tricalcium Phosphate for the Design of Potential Drug Device Combined Systems. Chemistry of Materials, 2008, 20, 182-191. | 3.2 | 48 |
| 35 | Investigation of alendronate-doped apatitic cements as a potential technology for the prevention of osteoporotic hip fractures: Critical influence of the drug introduction mode on the in vitro cement properties. Acta Biomaterialia, 2011, 7, 759-770. | 4.1 | 46 |
| 36 | A new technological procedure using sucrose as porogen compound to manufacture porous biphasic calcium phosphate ceramics of appropriate micro- and macrostructure. Ceramics International, 2010, 36, 93-101. | 2.3 | 44 |

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|---|---|---|---|
| 37 | Design and properties of novel gallium-doped injectable apatitic cements. Acta Biomaterialia, 2015, 24, 322-332. | 4.1 | 44 |
| 38 | Gallium as a potential candidate for treatment of osteoporosis. Drug Discovery Today, 2012, 17, 1127-1132. | 3.2 | 43 |
| 39 | Therapeutic strategies for treating osteolytic bone metastases. Drug Discovery Today, 2014, 19, 1419-1426. | 3.2 | 43 |
| 40 | Vertebroplasty using bisphosphonate-loaded calcium phosphate cement in a standardized vertebral body bone defect in an osteoporotic sheep model. Acta Biomaterialia, 2014, 10, 4887-4895. | 4.1 | 43 |
| 41 | Biomaterial porosity determined by fractal dimensions, succolarity and lacunarity on microcomputed tomographic images. Materials Science and Engineering C, 2013, 33, 2025-2030. | 3.8 | 42 |
| 42 | Hybrid materials applied to biotechnologies: coating of calcium phosphates for the design of implants active against bone resorption disorders. Journal of Materials Chemistry, 2005, 15, 3869. | 6.7 | 41 |
| 43 | Biphasic Calcium Phosphate Microparticles for Bone Formation: Benefits of Combination with Blood Clot. Tissue Engineering - Part A, 2010, 16, 3495-3505. | 1.6 | 39 |
| 44 | Injectable calcium phosphate scaffold and bone marrow graft for bone reconstruction in irradiated areas: An experimental study in rats. Biomaterials, 2006, 27, 4566-4572. | 5.7 | 35 |
| 45 | Injectable bone substitute to preserve alveolar ridge resorption after tooth extraction: A study in dog. Journal of Materials Science: Materials in Medicine, 2006, 17, 1145-1152. | 1.7 | 32 |
| 46 | Calcium-deficient apatite: influence of granule size and consolidation mode on release and in vitro activity of vancomycin. Biomaterials, 2003, 24, 1265-1270. | 5.7 | 31 |
| 47 | Fate of Bone Marrow Stromal Cells in a Syngenic Model of Bone Formation. Tissue Engineering - Part A, 2011, 17, 2267-2278. | 1.6 | 29 |
| 48 | Vancomycin biodegradable poly(lactide-co-glycolide) microparticles for bone implantation. Influence of the formulation parameters on the size, morphology, drug loading andin vitrorelease. Journal of Microencapsulation, 2005, 22, 841-852. | 1.2 | 27 |
| 49 | Calcium-deficient apatite synthesized by ammonia hydrolysis of dicalcium phosphate dihydrate: Influence of temperature, time, and pressure. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2007, 80B, 32-42. | 1.6 | 26 |
| 50 | Novel phosphateâ€“phosphonate hybrid nanomaterials applied to biology. Progress in Solid State Chemistry, 2006, 34, 257-266. | 3.9 | 25 |
| 51 | Orthopedic Implant Used as Drug Delivery System: Clinical Situation and State of the Research. Current Drug Delivery, 2008, 5, 59-63. | 0.8 | 24 |
| 52 | Prediction of bone density around orthopedic implants delivering bisphosphonate. Journal of Biomechanics, 2009, 42, 1206-1211. | 0.9 | 24 |
| 53 | Osteoclastic differentiation of mouse and human monocytes in a plasma clot/biphasic calcium phosphate microparticles composite. , 2010, 20, 379-392. | | 24 |
| 54 | Gallium enhances reconstructive properties of a calcium phosphate bone biomaterial. Journal of Tissue Engineering and Regenerative Medicine, 2018, 12, e854-e866. | 1.3 | 20 |

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|---|---|---|---|
| 55 | Bone texture analysis of human femurs using a new device (BMAâ„¢) improves failure load prediction. Osteoporosis International, 2012, 23, 1311-1316. | 1.3 | 18 |
| 56 | Nuclear magnetic resonance spectroscopy of bone substitutes. Bone, 1999, 25, 103S-105S. | 1.4 | 16 |
| 57 | High-frequency impedance measurement as a relevant tool for monitoring the apatitic cement setting reaction. Acta Biomaterialia, 2014, 10, 940-950. | 4.1 | 15 |
| 58 | A straightforward approach to enhance the textural, mechanical and biological properties of injectable calcium phosphate apatitic cements (CPCs): CPC/blood composites, a comprehensive study. Acta Biomaterialia, 2017, 62, 328-339. | 4.1 | 15 |
| 59 | Surface potential and osteoblast attraction to calcium phosphate compounds is affected by selected alkaline hydrolysis processing. Journal of Materials Science: Materials in Medicine, 2004, 15, 841-846. | 1.7 | 14 |
| 60 | Na-doped Î²-tricalcium phosphate: physico-chemical and in vitro biological properties. Journal of Materials Science: Materials in Medicine, 2011, 22, 593-600. | 1.7 | 14 |
| 61 | Gallium, a promising candidate to disrupt the vicious cycle driving osteolytic metastases. Biochemical Pharmacology, 2016, 116, 11-21. | 2.0 | 14 |
| 62 | In Vitro Carbonated Apatite Precipitation on Biphasic Calcium Phosphate Pellets Presenting Various HA/Î²-TCP Ratios. Key Engineering Materials, 2000, 192-195, 119-122. | 0.4 | 12 |
| 63 | Analgesic properties of calcium phosphate apatite loaded with bupivacaine on postoperative pain. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2010, 94B, 89-96. | 1.6 | 11 |
| 64 | Calcium Phosphate Ceramics as Bone Drug-Combined Devices. Key Engineering Materials, 0, 441, 181-201. | 0.4 | 11 |
| 65 | Combination of blood and biphasic calcium phosphate microparticles for the reconstruction of large bone defects in dog: A pilot study. Journal of Biomedical Materials Research - Part A, 2018, 106, 1842-1850. | 2.1 | 11 |
| 66 | Design and properties of a novel radiopaque injectable apatitic calcium phosphate cement, suitable for imageâ€guided implantation. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2018, 106, 2786-2795. | 1.6 | 11 |
| 67 | Inactivation of Staphylococcus aureus in calcium phosphate biomaterials via isostatic compression. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2009, 91B, 348-353. | 1.6 | 10 |
| 68 | In Vivo Assessment of the Antimicrobial Activity of a Calcium-Deficient Apatite Vancomycin Drug Delivery System in a Methicillin-Resistant Staphylococcus aureus Rabbit Osteomyelitis Experimental Model. Antimicrobial Agents and Chemotherapy, 2010, 54, 950-952. | 1.4 | 10 |
| 69 | Solid-state 31P and 1H chemical MR micro-imaging of hard tissues and biomaterials with magic angle spinning at very high magnetic field. Scientific Reports, 2017, 7, 8224. | 1.6 | 10 |
| 70 | In vivo resorption of injectable apatitic calcium phosphate cements: Critical role of the intergranular microstructure. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2020, 108, 367-376. | 1.6 | 10 |
| 71 | Impact of Dynamic Culture in the RCCS! Bioreactor on a Three-Dimensional Model of Bone Matrix Formation. Procedia Engineering, 2011, 10, 3662-3667. | 1.2 | 9 |
| 72 | Assay of in vitro osteoclast activity on dentine, and synthetic calcium phosphate bone substitutes. Journal of Materials Science: Materials in Medicine, 2012, 23, 797-803. | 1.7 | 9 |

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|---|---|---|---|
| 73 | Effects of citrate and NaCl on size, morphology, crystallinity and microstructure of calcium phosphates obtained from aqueous solutions at acidic or near-neutral pH. Journal of Dairy Research, 2012, 79, 238-248. | 0.7 | 8 |
| 74 | Pain Management After Bone Reconstruction Surgery Using an Analgesic Bone Cement: A Functional Noninvasive In Vivo Study Using Gait Analysis. Journal of Pain, 2018, 19, 1169-1180. | 0.7 | 8 |
| 75 | Skin sensitization study of two hydroxypropyl methylcellulose components (Benecel and E4M) of an injectable bone substitute in guinea pigs. Journal of Materials Science: Materials in Medicine, 2002, 13, 149-154. | 1.7 | 7 |
| 76 | In Vitro Characterization of Calcium Phosphate Biomaterial Loaded with Linezolid for Osseous Bone Defect Implantation. Journal of Biomaterials Applications, 2012, 26, 811-828. | 1.2 | 7 |
| 77 | Polarized infrared reflectance spectra of brushite (CaHPO4â‹…2H2O) crystal investigation of the phosphate stretching modes. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2013, 111, 7-13. | 2.0 | 6 |
| 78 | Combination of biocompatible hydrogel precursors to apatitic calcium phosphate cements (<scp>CPCs</scp>): Influence of the in situ hydrogel reticulation on the <scp>CPC</scp> properties. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2021, 109, 102-116. | 1.6 | 6 |
| 79 | Improvement of macroporous biphasic phosphocalcic ceramics for the filling of bone defects. IRBM News, 2005, 26, 247-248. | 0.1 | 5 |
| 80 | Raman and Infrared Studies of Substituted Î²-TCP. Key Engineering Materials, 0, 493-494, 225-230. | 0.4 | 5 |
| 81 | A delivery system of linezolid to enhance the MRSA osteomyelitis prognosis: in vivo experimental assessment. European Journal of Clinical Microbiology and Infectious Diseases, 2013, 32, 195-198. | 1.3 | 5 |
| 82 | Calcium supplementation decreases BCP-induced inflammatory processes in blood cells through the NLRP3 inflammasome down-regulation. Acta Biomaterialia, 2017, 57, 462-471. | 4.1 | 5 |
| 83 | Polarized Raman spectra of brushite (CaHPO<sub>4</sub>.2H<sub>2</sub>O) crystal. Investigation of the phosphate stretching modes, study of the LOTO splitting. Journal of Raman Spectroscopy, 2016, 47, 971-977. | 1.2 | 4 |
| 84 | Macroporous biphasic calcium phosphate ceramics. , 1997, , 71-74. | | 4 |
| 85 | Improvement of Porosity of a Calcium Phosphate Cement by Incorporation of Biodegradable Polymer Microspheres. Key Engineering Materials, 2005, 284-286, 129-132. | 0.4 | 3 |
| 86 | Proteomic analysis identified LBP and CD14 as key proteins in blood/biphasic calcium phosphate microparticle interactions. Acta Biomaterialia, 2021, 127, 298-312. | 4.1 | 3 |
| 87 | An in vitro analysis model for investigating the staining effect of various chlorhexidine-based mouthwashes. Journal of Clinical and Experimental Dentistry, 2017, 9, 0-0. | 0.5 | 3 |
| 88 | In Vivo Comparison of Two Injectable Calcium Phosphate Biomaterials: Ionic Cement and Polymer-Associated Particulate Ceramic. Key Engineering Materials, 2000, 192-195, 801-804. | 0.4 | 2 |
| 89 | NMR Spectroscopy of Bone and Bone Substitutes. Key Engineering Materials, 2000, 192-195, 759-764. | 0.4 | 2 |
| 90 | Vibrational Properties of Sodium Substituted Î²-Tricalcium Phosphate. Key Engineering Materials, 2007, 361-363, 75-78. | 0.4 | 2 |

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|---|---|---|---|
| 91 | Rheological Properties of an Injectable Bioactive Calcium Phosphate Material. Key Engineering Materials, 2007, 330-332, 847-850. | 0.4 | 2 |
| 92 | Exploring relationships between fractal dimension and trabecular bone characteristics. Proceedings of SPIE, 2012, , . | 0.8 | 2 |
| 93 | Maxillary Sinus Bone Grafting with an Injectable Bone Substitute: a Sheep Study. Key Engineering Materials, 2004, 254-256, 193-196. | 0.4 | 1 |
| 94 | Mechanical Properties of Macroporous Biphasic Calcium Phosphate Bioceramics Fabricated Using a Porogen. Key Engineering Materials, 2005, 280-283, 1549-1554. | 0.4 | 1 |
| 95 | Mechanical Properties of Calcium Phosphate Cements (CPC) for Bone Substitution: Influence of Fabrication and Microstructure. Key Engineering Materials, 0, 493-494, 409-414. | 0.4 | 1 |
| 96 | Gallium-Doped Î²-Tricalcium Phosphate Ceramics: Characterization and Properties. Key Engineering Materials, 2011, 493-494, 195-198. | 0.4 | 1 |
| 97 | New approaches for the local prevention of osteoporotic fractures. Materials Research Society Symposia Proceedings, 2012, 1376, 26. | 0.1 | 1 |
| 98 | Delivery systems of local anesthetics in bone surgery: are they efficient and safe?. Drug Discovery Today, 2018, 23, 1897-1903. | 3.2 | 1 |
| 99 | Young's Modulus of Macroporous Bioceramics: Measurement and Numerical Simulation. Bioceramics Development and Applications, 2010, 1, 1-3. | 0.3 | 1 |
| 100 | Calcium Deficient Apatite: An In-Vitro Model for Vancomycin Controlled Release. Key Engineering Materials, 2002, 218-220, 179-182. | 0.4 | 0 |
| 101 | Assessment of Cancellous Bone Architecture after Implantation of an Injectable Bone Substitute. Key Engineering Materials, 2004, 254-256, 55-58. | 0.4 | 0 |
| 102 | Bone Marrow Autograft Associated to Macroporous Biphasic Calcium Phosphate for Bone Substitution in an Animal Model of Sequels of Radiotherapy. Key Engineering Materials, 2005, 284-286, 285-288. | 0.4 | 0 |
| 103 | Modeling Relations between Processing, Microstructure and Mechanical Properties of Porous Bioceramics. Advanced Materials Research, 2006, 15-17, 519-524. | 0.3 | 0 |
| 104 | Validation of an Analytical Model Describing Mechanical Properties of Porous BCP Ceramics. Key Engineering Materials, 2007, 361-363, 15-18. | 0.4 | 0 |
| 105 | Influence of Association Type of Bisphosphonates with Calcium-Deficient Apatite on Drug Release. Key Engineering Materials, 2007, 361-363, 51-54. | 0.4 | 0 |
| 106 | Calcium Phosphates / Biphosphonates Combinationsâ€¦Towards a Therapeutic Synergy. Key Engineering Materials, 0, 377, 99-110. | 0.4 | 0 |
| 107 | NMR Spectroscopy Contribution to the Study of Biomaterial Mineralisation. , 2002, , 209-218. | | 0 |