

# Akiko Nagai

## List of Publications by Year in descending order

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Version: 2024-02-01

93  
papers

1,318  
citations

361413

20  
h-index

414414

32  
g-index

96  
all docs

96  
docs citations

96  
times ranked

1490  
citing authors

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 1  | Efficacy of polarized hydroxyapatite and silk fibroin composite dressing gel on epidermal recovery from full-thickness skin wounds. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2009, 90B, 641-646. | 3.4 | 101       |
| 2  | Surface Electric Fields Increase Osteoblast Adhesion through Improved Wettability on Hydroxyapatite Electret. <i>ACS Applied Materials &amp; Interfaces</i> , 2009, 1, 2181-2189.   | 8.0 | 71        |
| 3  | Electrically polarized micro-arc oxidized TiO <sub>2</sub> coatings with enhanced surface hydrophilicity. <i>Acta Biomaterialia</i> , 2012, 8, 860-865.   | 8.3 | 53        |
| 4  | Neonatal estrogen exposure inhibits steroidogenesis in the developing rat ovary. <i>Developmental Dynamics</i> , 2001, 221, 443-453.  | 1.8 | 48        |
| 5  | Polarization and microstructural effects of ceramic hydroxyapatite electrets. <i>Journal of Applied Physics</i> , 2010, 107, .  | 2.5 | 46        |
| 6  | Cell spreading on titanium dioxide film formed and modified with aerosol beam and femtosecond laser. <i>Applied Surface Science</i> , 2014, 288, 649-653.   | 6.1 | 41        |
| 7  | Polarized hydroxyapatite promotes spread and motility of osteoblastic cells. <i>Journal of Biomedical Materials Research - Part A</i> , 2010, 92A, 783-790.   | 4.0 | 38        |
| 8  | Investigation of Realizing Both Antibacterial Property and Osteogenic Cell Compatibility on Titanium Surface by Simple Electrochemical Treatment. <i>ACS Biomaterials Science and Engineering</i> , 2019, 5, 5623-5630.                 | 5.2 | 38        |
| 9  | Hierarchical periodic micro/nano-structures on nitinol and their influence on oriented endothelialization and anti-thrombosis. <i>Materials Science and Engineering C</i> , 2015, 57, 1-6.  | 7.3 | 37        |
| 10 | Ag nanoparticle-coated zirconia for antibacterial prosthesis. <i>Materials Science and Engineering C</i> , 2017, 78, 1054-1060.   | 7.3 | 37        |
| 11 | Rate of Bonelike Apatite Formation Accelerated on Polarized Porous Hydroxyapatite. <i>Journal of the American Ceramic Society</i> , 2008, 91, 3943-3949.  | 3.8 | 36        |
| 12 | Electrical Polarization of $\beta$ -Tricalcium Phosphate Ceramics. <i>Journal of the American Ceramic Society</i> , 2010, 93, 2175-2177.  | 3.8 | 35        |
| 13 | Characterization of air-formed surface oxide film on a Co-Ni-Cr-Mo alloy (MP35N) and its change in Hanks solution. <i>Applied Surface Science</i> , 2012, 258, 5490-5498.   | 6.1 | 32        |
| 14 | Enhancement of nerve regeneration along a chitosan nanofiber mesh tube on which electrically polarized $\beta$ -tricalcium phosphate particles are immobilized. <i>Acta Biomaterialia</i> , 2010, 6, 4027-4033.                         | 8.3 | 27        |
| 15 | Hydroxyapatite electret accelerates reendothelialization and attenuates intimal hyperplasia occurring after endothelial removal of the rabbit carotid artery. <i>Life Sciences</i> , 2008, 82, 1162-1168.                               | 4.3 | 25        |
| 16 | Enhanced osteoblastic adhesion through improved wettability on polarized hydroxyapatite. <i>Journal of the Ceramic Society of Japan</i> , 2010, 118, 474-478.   | 1.1 | 25        |
| 17 | Electrostatic induction power generator using hydroxyapatite ceramic electrets. <i>Materials Research Bulletin</i> , 2016, 74, 50-56.   | 5.2 | 24        |
| 18 | Response of osteoblast-like MG63 cells to TiO <sub>2</sub> layer prepared by micro-arc oxidation and electric polarization. <i>Journal of the European Ceramic Society</i> , 2012, 32, 2647-2652.                                       | 5.7 | 23        |

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|----|---|-----|-----------|
| 19 | Concentration-dependent effects of fibronectin adsorbed on hydroxyapatite surfaces on osteoblast adhesion. <i>Materials Science and Engineering C</i> , 2015, 48, 378-383.  | 7.3 | 23        |
| 20 | Acceleration of new bone formation by an electrically polarized hydroxyapatite microgranule/platelet-rich plasma composite. <i>Acta Biomaterialia</i> , 2012, 8, 2778-2787.   | 8.3 | 22        |
| 21 | The Effects of Various Metallic Surfaces on Cellular and Bacterial Adhesion. <i>Metals</i> , 2019, 9, 1145.   | 2.3 | 22        |
| 22 | Chemical and Biological Roles of Zinc in a Porous Titanium Dioxide Layer Formed by Micro-Arc Oxidation. <i>Coatings</i> , 2019, 9, 705.   | 2.6 | 21        |
| 23 | Electric polarization and mechanism of B-type carbonated apatite ceramics. <i>Journal of Biomedical Materials Research - Part A</i> , 2011, 99A, 116-124.   | 4.0 | 20        |
| 24 | Effect of Poly(acrylic acid) and Polarization on the Controlled Crystallization of Calcium Carbonate on Single-Phase Calcite Substrates. <i>Crystal Growth and Design</i> , 2013, 13, 2928-2937.                                | 3.0 | 20        |
| 25 | Increased Expression of Mullerian-Inhibiting Substance Correlates with Inhibition of Follicular Growth in the Developing Ovary of Rats Treated with E2 Benzoate. <i>Endocrinology</i> , 2002, 143, 304-312.                     | 2.8 | 20        |
| 26 | Deposition of boron doped DLC films on TiNb and characterization of their mechanical properties and blood compatibility. <i>Science and Technology of Advanced Materials</i> , 2017, 18, 76-87.                                 | 6.1 | 19        |
| 27 | Conduction properties of non-stoichiometric hydroxyapatite whiskers for biomedical use. <i>Journal of the Ceramic Society of Japan</i> , 2008, 116, 815-821.  | 1.1 | 18        |
| 28 | Fast Oxide Ion Conduction Due to Carbonate Substitution in Hydroxyapatite. <i>Journal of the American Ceramic Society</i> , 2010, 93, 3577-3579.  | 3.8 | 18        |
| 29 | Crystallization of Calcium Phosphate in Agar Hydrogels in the Presence of Polyacrylic Acid under Double Diffusion Conditions. <i>Crystal Growth and Design</i> , 2017, 17, 604-611.   | 3.0 | 18        |
| 30 | Time-Transient Effects of Silver and Copper in the Porous Titanium Dioxide Layer on Antibacterial Properties. <i>Journal of Functional Biomaterials</i> , 2020, 11, 44.   | 4.4 | 18        |
| 31 | Effects of controlled micro/nanosurfaces on osteoblast proliferation. <i>Journal of Biomedical Materials Research - Part A</i> , 2017, 105, 2589-2596.  | 4.0 | 17        |
| 32 | Size Control Synthesis of Hydroxyapatite Plates and Their Application in the Preparation of Highly Oriented Films. <i>Crystal Growth and Design</i> , 2018, 18, 5038-5044.  | 3.0 | 17        |
| 33 | Investigation of antibacterial effect of copper introduced titanium surface by electrochemical treatment against facultative anaerobic bacteria. <i>Dental Materials Journal</i> , 2020, 39, 639-647.                           | 1.8 | 17        |
| 34 | Morphological and functional changes in RAW 264 macrophage-like cells in response to a hydrated layer of carbonate-substituted hydroxyapatite. <i>Journal of Biomedical Materials Research - Part A</i> , 2017, 105, 1063-1070. | 4.0 | 16        |
| 35 | Exposure of neonatal rats to diethylstilbestrol affects the expression of genes involved in ovarian differentiation. <i>Journal of Medical and Dental Sciences</i> , 2003, 50, 35-40.   | 0.4 | 16        |
| 36 | Fundamental electrical properties of ceramic electrets. <i>Materials Research Bulletin</i> , 2013, 48, 3854-3859.   | 5.2 | 15        |

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|----|--|-----|-----------|
| 37 | Differences in the calcification of preosteoblast cultured on sputter-deposited titanium, zirconium, and gold. <i>Journal of Biomedical Materials Research - Part A</i> , 2016, 104, 639-651.                            | 4.0 | 13        |
| 38 | Controlled Crystallization of Calcium Carbonate via Cooperation of Polyaspartic Acid and Polylysine Under Double-Diffusion Conditions in Agar Hydrogels. <i>ACS Omega</i> , 2018, 3, 16681-16692.                        | 3.5 | 13        |
| 39 | Possible involvement of enhanced arginase activity due to up-regulated arginases and decreased hydroxyarginine in accelerating intimal hyperplasia with hyperglycemia. <i>Vascular Pharmacology</i> , 2007, 47, 272-280. | 2.1 | 12        |
| 40 | Polarization of hybridized calcium phosphoaluminosilicates with 45S5-type bioglasses. <i>Biomedical Materials (Bristol)</i> , 2010, 5, 025001.   | 3.3 | 12        |
| 41 | The effect of glucose modification of hydroxyapatite nanoparticles on gene delivery. <i>Journal of Biomedical Materials Research - Part A</i> , 2019, 107, 61-66.  | 4.0 | 12        |
| 42 | Improving bioactivity and durability of yttria-stabilized zirconia. <i>Journal of Materials Science</i> , 2011, 46, 7335-7343.   | 3.7 | 10        |
| 43 | Thermally stimulated depolarization current measurements in cubic and tetragonal yttria-stabilized zirconia. <i>Solid State Ionics</i> , 2014, 262, 500-503.   | 2.7 | 10        |
| 44 | Synthesis and enhanced bone regeneration of carbonate substituted octacalcium phosphate. <i>Bio-Medical Materials and Engineering</i> , 2017, 28, 9-21.  | 0.6 | 10        |
| 45 | Electrovector effect on bone-like apatite crystal growth on Inside pores of polarized porous hydroxyapatite ceramics in simulated body fluid. <i>Journal of the Ceramic Society of Japan</i> , 2008, 116, 23-27.         | 1.1 | 9         |
| 46 | Endothelial cell migration and morphogenesis on silk fibroin scaffolds containing hydroxyapatite eletret. <i>Journal of Biomedical Materials Research - Part A</i> , 2012, 100A, 969-977.                                | 4.0 | 9         |
| 47 | Dielectric evaluation of fluorine substituted hydroxyapatite. <i>Journal of the Ceramic Society of Japan</i> , 2013, 121, 770-774.   | 1.1 | 9         |
| 48 | Enhanced osteoconductivity of titanium implant by polarization-induced surface charges. <i>Journal of Biomedical Materials Research - Part A</i> , 2014, 102, 3077-3086.   | 4.0 | 9         |
| 49 | Electrical conduction and polarization of calcite single crystals. <i>Physics and Chemistry of Minerals</i> , 2012, 39, 761-768.   | 0.8 | 8         |
| 50 | Phospholipid polymer electrodeposited on titanium inhibits platelet adhesion. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2016, 104, 554-560.  | 3.4 | 8         |
| 51 | Corrosion Behavior and Bacterial Viability on Different Surface States of Copper. <i>Materials Transactions</i> , 2020, 61, 1143-1148.   | 1.2 | 8         |
| 52 | Regulation of Osteoblast-Like Cell Behaviors on Hydroxyapatite by Electrical Polarization. <i>Key Engineering Materials</i> , 2007, 361-363, 1055-1058.  | 0.4 | 7         |
| 53 | Comparison of nerve regenerative efficacy between decellularized nerve graft and nonwoven chitosan conduit. <i>Bio-Medical Materials and Engineering</i> , 2016, 27, 75-85.  | 0.6 | 7         |
| 54 | No Dynamic Changes in Blood-brain Barrier Permeability Occur in Developing Rats During Local Cortex Exposure to Microwaves. <i>In Vivo</i> , 2015, 29, 351-7.  | 1.3 | 7         |

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|----|--|-----|-----------|
| 55 | Anodic oxidation of a Co-Ni-Cr-Mo alloy and its inhibitory effect on platelet activation. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2014, 102, 659-666.                            | 3.4 | 6         |
| 56 | Mouse embryonic stem cells cultured under serum- and feeder-free conditions maintain their self-renewal capacity on hydroxyapatite. <i>Materials Science and Engineering C</i> , 2014, 34, 214-220.                      | 7.3 | 6         |
| 57 | Cooperative effects of polarization and polyaspartic acid on formation of calcium carbonate films with a multiple phase structure on oriented calcite substrates. <i>Journal of Crystal Growth</i> , 2014, 402, 179-186. | 1.5 | 6         |
| 58 | Expression of heme oxygenase in the eutopic and ectopic endometrium in patients with adenomyosis. <i>Gynecological Endocrinology</i> , 2012, 28, 892-896.  | 1.7 | 5         |
| 59 | A critical phenomenon of phase transition in hydroxyapatite investigated by thermally stimulated depolarization currents. <i>Journal of the American Ceramic Society</i> , 2017, 100, 501-505.                           | 3.8 | 5         |
| 60 | Involvement of altered arginase activity, arginase I expression and NO production in accelerated intimal hyperplasia following cigarette smoke extract. <i>Life Sciences</i> , 2008, 83, 453-459.                        | 4.3 | 4         |
| 61 | Surface Electric Fields of Apatite Electret Promote Osteoblastic Responses. <i>Key Engineering Materials</i> , 0, 529-530, 357-360.  | 0.4 | 4         |
| 62 | Controlled calcite nucleation on polarized calcite single crystal substrates in the presence of polyacrylic acid. <i>Journal of Crystal Growth</i> , 2015, 415, 7-14.  | 1.5 | 4         |
| 63 | No changes in cerebral microcirculatory parameters in rat during local cortex exposure to microwaves. <i>In Vivo</i> , 2015, 29, 207-15.   | 1.3 | 4         |
| 64 | Surface properties of Al <sub>2</sub> O <sub>3</sub> -YSZ ceramic composites modified by a combination of biomimetic coatings and electric polarization. <i>Applied Surface Science</i> , 2012, 262, 45-50.              | 6.1 | 3         |
| 65 | Sol-gel synthesis and electrical properties of sodium ion conducting solid electrolyte with Na <sub>5</sub> YSi <sub>4</sub> O <sub>12</sub> -type structure. <i>Open Ceramics</i> , 2021, 8, 100175.                    | 2.0 | 3         |
| 66 | Comparison of Hydroxyapatite with Carbonate Apatite in Osteoclastic Cell Resorptive Activity. <i>Key Engineering Materials</i> , 0, 361-363, 1039-1042.  | 0.4 | 2         |
| 67 | Enhanced Effects of New Bone Formation by an Electrically Polarized Hydroxyapatite Microgranule/Platelet-Rich Plasma Composite Gel. <i>Key Engineering Materials</i> , 0, 529-530, 82-87.                                | 0.4 | 2         |
| 68 | Thermally Stimulated Depolarization Current in 3 Mol% Yttria-Doped Zirconia. <i>Key Engineering Materials</i> , 2013, 582, 135-138.  | 0.4 | 2         |
| 69 | Biocompatibility of Titanium Dioxide Film Modified by Femtosecond Laser Irradiation. <i>Materials Science Forum</i> , 0, 783-786, 1377-1382.   | 0.3 | 2         |
| 70 | Regulation of periodontal ligament-derived cells by type III collagen-coated hydroxyapatite. <i>Bio-Medical Materials and Engineering</i> , 2017, 29, 15-27.   | 0.6 | 2         |
| 71 | IMPROVED WETTABILITY INCREASES OSTEOBLASTIC ADHESION ON HYDROXYAPATITE. <i>Phosphorus Research Bulletin</i> , 2011, 25, 28-32.   | 0.6 | 2         |
| 72 | POLARIZED YTTRIA-STABILIZED ZIRCONIA IMPROVES DURABILITY FOR DEGRADATION AND APATITE FORMATION IN SIMULATED BODY FLUID. <i>Phosphorus Research Bulletin</i> , 2012, 26, 77-80.   | 0.6 | 2         |

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|----|---|-----|-----------|
| 73 | Modulation of Osteoblast-Like Cell Behavior Cultured on Hydroxyapatite by Thrombin. Journal of the Ceramic Society of Japan, 2007, 115, 205-209.  | 1.3 | 1         |
| 74 | Surface Modification with Micro-arc Oxidation. , 2019, , 523-534.   |     | 1         |
| 75 | Plate-like hydroxyapatite synthesized from dodecanedioic acid enhances chondrogenic cell proliferation. Bio-Medical Materials and Engineering, 2019, 30, 375-386.                                 | 0.6 | 1         |
| 76 | An oriented hydroxyapatite film with arrayed plate-like particles enhance chondrogenic differentiation of ATDC5 cells. Journal of Biomedical Materials Research - Part A, 2020, 108, 537-544.     | 4.0 | 1         |
| 77 | Cardiomyocyte uptake mechanism of a hydroxyapatite nanoparticle mediated gene delivery system. Beilstein Journal of Nanotechnology, 2020, 11, 1685-1692.  | 2.8 | 1         |
| 78 | No Dynamic Changes in Inflammation-related Microcirculatory Parameters in Developing Rats During Local Cortex Exposure to Microwaves. In Vivo, 2015, 29, 561-7.                                   | 1.3 | 1         |
| 79 | Biocompatibility and water durability of alumina-zirconia ceramics blended with microsized HA particles. Journal of the Ceramic Society of Japan, 2010, 118, 498-501.                             | 1.1 | 0         |
| 80 | Electrical Polarization Depresses Low Temperature Degradation and Promotes Bioactivity of Chemically Treated Yttria-Stabilized Zirconia. Key Engineering Materials, 0, 493-494, 11-15.            | 0.4 | 0         |
| 81 | The Storing Properties of Electric Energy in Bone. Key Engineering Materials, 2011, 493-494, 170-174.   | 0.4 | 0         |
| 82 | Effect of Polarization Treatment Time on Inhibition of Low Temperature Degradation in Y-Doped $ZrO_2$ . Key Engineering Materials, 0, 529-530, 601-604.   | 0.4 | 0         |
| 83 | SURFACE PROPERTIES OF CERAMIC HYDROXYAPATITE ELECTRETS. Phosphorus Research Bulletin, 2012, 26, 6-7.  | 0.6 | 0         |
| 84 | Drug Adsorption Property of Surfaces of Polarized Calcium Phosphate Powders. Key Engineering Materials, 0, 566, 302-305.  | 0.4 | 0         |
| 85 | Electric poling of cement composites of hydroxyapatite whiskers with chitosan and their chemical properties in simulated body fluid. Journal of the Ceramic Society of Japan, 2013, 121, 895-900. | 1.1 | 0         |
| 86 | Femtosecond laser induced periodic nanostructures and microstructures on ti plate for control of cell spreading. , 2014, , .  |     | 0         |
| 87 | Effect of periodic nanostructures formed with femtosecond laser on cell spreading. , 2014, , .  |     | 0         |
| 88 | SINTERING AND OSTEOCLAST BEHAVIOR OF CARBONATE APATITE CERAMICS. Phosphorus Research Bulletin, 2012, 27, 45-49.   | 0.6 | 0         |
| 89 | OCTACALCIUM PHOSPHATE-MEDIATED CEMENT AS A ROOT CANAL FILLING MATERIAL FOR PRIMARY TEETH. Phosphorus Research Bulletin, 2012, 26, 33-38.  | 0.6 | 0         |
| 90 | G0400303 Blood compatibility of a-BC:H films prepared by pulsed plasma CVD. The Proceedings of Mechanical Engineering Congress Japan, 2015, 2015, _G0400303-_G0400303-.                           | 0.0 | 0         |

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|----|--|-----|-----------|
| 91 | Corrosion Behavior and Bacterial Viability on Different Surface States of Copper. <i>Zairyo To Kankyo/Corrosion Engineering</i> , 2021, 70, 265-270.   | 0.2 | 0         |
| 92 | Local Injection of Hydroxyapatite Electret Ameliorated Infarct Size After Myocardial Infarction. <i>Circulation Reports</i> , 2022, 4, 38-47.  | 1.0 | 0         |
| 93 | Electrical polarization and ionic conduction properties of $\beta$ -tricalcium phosphate bioceramics with controlled vacancies by sodium ion substitution. <i>Ceramics International</i> , 2022, , . | 4.8 | 0         |