

# Peter Fratzl

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

596  
papers

38,417  
citations

99  
h-index

174  
g-index

652  
ext. papers

42,692  
ext. citations

7.4  
avg, IF

7.52  
L-index

#	Paper	IF	Citations
596	Mechanical model for the deformation of the wood cell wall. <i>International Journal of Materials Research</i> , <b>2022</b> , 95, 579-584	0.5	2
595	Mineralization generates megapascal contractile stresses in collagen fibrils.. <i>Science</i> , <b>2022</b> , 376, 188-192	33.3	5
594	Small-angle scattering from spherical particles on randomly oriented interfaces. <i>International Journal of Materials Research</i> , <b>2022</b> , 97, 290-294	0.5	
593	Alterations of bone material properties in growing Ifitm5/BRIL p.S42 knock-in mice, a new model for atypical type VI osteogenesis imperfecta. <i>Bone</i> , <b>2022</b> , 116451	4.7	0
592	Adaptation of Biofilm Growth, Morphology, and Mechanical Properties to Substrate Water Content. <i>ACS Biomaterials Science and Engineering</i> , <b>2021</b> , 7, 5315-5325	5.5	1
591	Wood and the Activity of Dead Tissue. <i>Advanced Materials</i> , <b>2021</b> , 33, e2001412	24	8
590	Tomographic X-ray scattering based on invariant reconstruction: analysis of the 3D nanostructure of bovine bone. <i>Journal of Applied Crystallography</i> , <b>2021</b> , 54, 486-497	3.8	0
589	Polyelectrolyte Substrate Coating for Controlling Biofilm Growth at Solid-Air Interface. <i>Advanced Materials Interfaces</i> , <b>2021</b> , 8, 2001807	4.6	3
588	Breast cancer-secreted factors perturb murine bone growth in regions prone to metastasis. <i>Science Advances</i> , <b>2021</b> , 7,	14.3	9
587	Quantitative Backscattered Electron Imaging of Bone Using a Thermionic or a Field Emission Electron Source. <i>Calcified Tissue International</i> , <b>2021</b> , 109, 190-202	3.9	1
586	Collagen Pentablock Copolymers Form Smectic Liquid Crystals as Precursors for Mussel Byssus Fabrication. <i>ACS Nano</i> , <b>2021</b> , 15, 6829-6838	16.7	1
585	The effect of aging on the nanostructure of murine alveolar bone and dentin. <i>Journal of Bone and Mineral Metabolism</i> , <b>2021</b> , 39, 757-768	2.9	
584	Interplay between mineral crystallinity and mineral accumulation in health and postmenopausal osteoporosis. <i>Acta Biomaterialia</i> , <b>2021</b> , 124, 374-381	10.8	2
583	3D Interrelationship between Osteocyte Network and Forming Mineral during Human Bone Remodeling. <i>Advanced Healthcare Materials</i> , <b>2021</b> , 10, e2100113	10.1	5
582	High-Performance All-Bio-Based Laminates Derived from Delignified Wood. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2021</b> , 9, 9638-9646	8.3	3
581	Spatiotemporal Measurement of Osmotic Pressures by FRET Imaging. <i>Angewandte Chemie - International Edition</i> , <b>2021</b> , 60, 6488-6495	16.4	3
580	The Earth's Lithosphere Inspires Materials Design. <i>Advanced Materials</i> , <b>2021</b> , 33, e2005473	24	6

579	Spatiotemporal Measurement of Osmotic Pressures by FRET Imaging. <i>Angewandte Chemie</i> , <b>2021</b> , 133, 6562-6569	3.6	0
578	Natural load-bearing protein materials. <i>Progress in Materials Science</i> , <b>2021</b> , 120, 100767	42.2	5
577	Effects of moisture and cellulose fibril angle on the tensile properties of native single Norway spruce wood fibres. <i>Wood Science and Technology</i> , <b>2021</b> , 55, 1305-1318	2.5	0
576	Advanced materials design based on waste wood and bark. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , <b>2021</b> , 379, 20200345	3	2
575	The spider cuticle: a remarkable material toolbox for functional diversity. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , <b>2021</b> , 379, 20200332	3	5
574	Architecturing materials at mesoscale: some current trends. <i>Materials Research Letters</i> , <b>2021</b> , 9, 399-421	7.4	11
573	Rapid collagen-directed mineralization of calcium fluoride nanocrystals with periodically patterned nanostructures. <i>Nanoscale</i> , <b>2021</b> , 13, 8293-8303	7.7	4
572	The mechanoreponse of bone is closely related to the osteocyte lacunocanalicular network architecture. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 32251-32259	11.5	26
571	Three-dimensional structural interrelations between cells, extracellular matrix, and mineral in normally mineralizing avian leg tendon. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 14102-14109	11.5	15
570	Synthesis of monodisperse rod-shaped silica particles through biotemplating of surface-functionalized bacteria. <i>Nanoscale</i> , <b>2020</b> , 12, 8732-8741	7.7	5
569	Adaptations for Wear Resistance and Damage Resilience: Micromechanics of Spider Cuticular Tools <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 2000400	15.6	16
568	Alterations of bone material properties in adult patients with X-linked hypophosphatemia (XLH). <i>Journal of Structural Biology</i> , <b>2020</b> , 211, 107556	3.4	13
567	Multi-scale modeling and mechanical performance characterization of stingray skeleton-inspired tessellations. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2020</b> , 138, 103906	5	6
566	Co-aligned chondrocytes: Zonal morphological variation and structured arrangement of cell lacunae in tessellated cartilage. <i>Bone</i> , <b>2020</b> , 134, 115264	4.7	12
565	Correlative Analysis of Specific Compatibilization in Composites by Coupling in situ X-Ray Scattering and Mechanical Tensile Testing. <i>Frontiers in Materials</i> , <b>2020</b> , 6,	4	1
564	Epidermal Cell Surface Structure and Chitin-Protein Co-assembly Determine Fiber Architecture in the Locust Cuticle. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 25581-25590	9.5	8
563	Hierarchically-structured metalloprotein composite coatings biofabricated from co-existing condensed liquid phases. <i>Nature Communications</i> , <b>2020</b> , 11, 862	17.4	20
562	Damage tolerance of lamellar bone. <i>Bone</i> , <b>2020</b> , 130, 115102	4.7	11

561	The Emergence of Complexity from a Simple Model for Tissue Growth. <i>Journal of Statistical Physics</i> , <b>2020</b> , 180, 459-473	1.5	0
560	Newly formed and remodeled human bone exhibits differences in the mineralization process. <i>Acta Biomaterialia</i> , <b>2020</b> , 104, 221-230	10.8	11
559	Network architecture strongly influences the fluid flow pattern through the lacunocanalicular network in human osteons. <i>Biomechanics and Modeling in Mechanobiology</i> , <b>2020</b> , 19, 823-840	3.8	20
558	Heterogeneity of the osteocyte lacuno-canalicular network architecture and material characteristics across different tissue types in healing bone. <i>Journal of Structural Biology</i> , <b>2020</b> , 212, 107616	3.4	1
557	Shape-preserving erosion controlled by the graded microarchitecture of shark tooth enameloid. <i>Nature Communications</i> , <b>2020</b> , 11, 5971	17.4	2
556	Globular structure of the hypermineralized tissue in human femoral neck. <i>Journal of Structural Biology</i> , <b>2020</b> , 212, 107606	3.4	2
555	Human and mouse bones physiologically integrate in a humanized mouse model while maintaining species-specific ultrastructure. <i>Science Advances</i> , <b>2020</b> , 6,	14.3	6
554	Surface-Enhanced Raman Scattering Microspectroscopy Enables the Direct Characterization of Biomineral-Associated Organic Material on Single Calcareous Microskeletons. <i>Journal of Physical Chemistry Letters</i> , <b>2020</b> , 11, 8623-8629	6.4	0
553	Twisters: An analogy of bilayers for twisting. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2020</b> , 134, 103742	5	2
552	Surface tension determines tissue shape and growth kinetics. <i>Science Advances</i> , <b>2019</b> , 5, eaav9394	14.3	42
551	Breaking the long-standing morphological paradigm: Individual prisms in the pearl oyster shell grow perpendicular to the c-axis of calcite. <i>Journal of Structural Biology</i> , <b>2019</b> , 205, 121-132	3.4	12
550	Melorheostotic Bone Lesions Caused by Somatic Mutations in MAP2K1 Have Deteriorated Microarchitecture and Periosteal Reaction. <i>Journal of Bone and Mineral Research</i> , <b>2019</b> , 34, 883-895	6.3	9
549	A hydrated crystalline calcium carbonate phase: Calcium carbonate hemihydrate. <i>Science</i> , <b>2019</b> , 363, 396-400	33.3	89
548	Towards a Connectomic Description of the Osteocyte Lacunocanalicular Network in Bone. <i>Current Osteoporosis Reports</i> , <b>2019</b> , 17, 186-194	5.4	28
547	Effect of Strontium Ions on Crystallization of Amorphous Calcium Carbonate. <i>Crystal Research and Technology</i> , <b>2019</b> , 54, 1900002	1.3	8
546	Multiscale analyses reveal native-like lamellar bone repair and near perfect bone-contact with porous strontium-loaded bioactive glass. <i>Biomaterials</i> , <b>2019</b> , 209, 152-162	15.6	29
545	The contribution of the pericanalicular matrix to mineral content in human osteonal bone. <i>Bone</i> , <b>2019</b> , 123, 76-85	4.7	24
544	Hypermineralization in the femoral neck of the elderly. <i>Acta Biomaterialia</i> , <b>2019</b> , 89, 330-342	10.8	8

543	Shear-Induced Crystallite Unfolding in Condensed Phase Nanodroplets Promotes Fiber Formation in a Biological Adhesive. <i>ACS Nano</i> , <b>2019</b> , 13, 4992-5001	16.7	16
542	Protecting Offspring Against Fire: Lessons From Seed Pods. <i>Frontiers in Plant Science</i> , <b>2019</b> , 10, 283	6.2	10
541	Unraveling the Rapid Assembly Process of Stiff Cellulosic Fibers from Mistletoe Berries. <i>Biomacromolecules</i> , <b>2019</b> , 20, 3094-3103	6.9	6
540	Mechanoregulation of Bone Remodeling and Healing as Inspiration for Self-Repair in Materials. <i>Biomimetics</i> , <b>2019</b> , 4,	3.7	7
539	Mechanical properties of stingray tesserae: High-resolution correlative analysis of mineral density and indentation moduli in tessellated cartilage. <i>Acta Biomaterialia</i> , <b>2019</b> , 96, 421-435	10.8	12
538	Osteoblastic lysosome plays a central role in mineralization. <i>Science Advances</i> , <b>2019</b> , 5, eaax0672	14.3	27
537	Multi-Method 3D Characterization of Different Tissue Types in Healing Bone. <i>Microscopy and Microanalysis</i> , <b>2019</b> , 25, 358-359	0.5	
536	Self-healing silk from the sea: role of helical hierarchical structure in Pinna nobilis byssus mechanics. <i>Soft Matter</i> , <b>2019</b> , 15, 9654-9664	3.6	5
535	Normal trabecular vertebral bone is formed via rapid transformation of mineralized spicules: A high-resolution 3D ex-vivo murine study. <i>Acta Biomaterialia</i> , <b>2019</b> , 86, 429-440	10.8	3
534	Cortical bone properties in the Brl/+ mouse model of Osteogenesis imperfecta as evidenced by acoustic transmission microscopy. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2019</b> , 90, 125-132	4.1	3
533	Effect of collagen packing and moisture content on leather stiffness. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2019</b> , 90, 1-10	4.1	8
532	Climate-Dependent Heat-Triggered Opening Mechanism of Seed Pods. <i>Advanced Science</i> , <b>2018</b> , 5, 17005726	17.2	20
531	Interplay between Calcite, Amorphous Calcium Carbonate, and Intracrystalline Organics in Sea Urchin Skeletal Elements. <i>Crystal Growth and Design</i> , <b>2018</b> , 18, 2189-2201	3.5	22
530	The Crystallization of Amorphous Calcium Carbonate is Kinetically Governed by Ion Impurities and Water. <i>Advanced Science</i> , <b>2018</b> , 5, 1701000	13.6	69
529	Metal-Tunable Self-Assembly of Hierarchical Structure in Mussel-Inspired Peptide Films. <i>ACS Nano</i> , <b>2018</b> , 12, 2160-2168	16.7	31
528	Hydrogen Bonding in Amorphous Calcium Carbonate and Molecular Reorientation Induced by Dehydration. <i>Journal of Physical Chemistry C</i> , <b>2018</b> , 122, 3591-3598	3.8	30
527	Tensile forces drive a reversible fibroblast-to-myofibroblast transition during tissue growth in engineered clefts. <i>Science Advances</i> , <b>2018</b> , 4, eaao4881	14.3	57
526	Additives influence the phase behavior of calcium carbonate solution by a cooperative ion-association process. <i>Journal of Materials Chemistry B</i> , <b>2018</b> , 6, 449-457	7.3	19

525	Reentrant phase transformation from crystalline ikaite to amorphous calcium carbonate. <i>CrystEngComm</i> , <b>2018</b> , 20, 2902-2906	3.3	4
524	The three-dimensional arrangement of the mineralized collagen fibers in elephant ivory and its relation to mechanical and optical properties. <i>Acta Biomaterialia</i> , <b>2018</b> , 72, 342-351	10.8	20
523	Correlations between nanostructure and micromechanical properties of healing bone. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2018</b> , 77, 258-266	4.1	15
522	Preface to the proceedings of the 12th international conference on the chemistry and biology of mineralized tissues. <i>Connective Tissue Research</i> , <b>2018</b> , 59, 1-5	3.3	7
521	Wood made denser and stronger. <i>Nature</i> , <b>2018</b> , 554, 172-173	50.4	6
520	Temperature-induced self-sealing capability of follicles. <i>Journal of the Royal Society Interface</i> , <b>2018</b> , 15,	4.1	8
519	Correlative imaging reveals physiochemical heterogeneity of microcalcifications in human breast carcinomas. <i>Journal of Structural Biology</i> , <b>2018</b> , 202, 25-34	3.4	23
518	Data on collagen structures in leather with varying moisture contents from small angle X-ray scattering and three point bend testing. <i>Data in Brief</i> , <b>2018</b> , 21, 1220-1226	1.2	1
517	Exploring mussel byssus fabrication with peptide-polymer hybrids: Role of pH and metal coordination in self-assembly and mechanics of histidine-rich domains. <i>European Polymer Journal</i> , <b>2018</b> , 109, 229-236	5.2	14
516	Biological composites-complex structures for functional diversity. <i>Science</i> , <b>2018</b> , 362, 543-547	33.3	179
515	Mobility of hydrous species in amorphous calcium/magnesium carbonates. <i>Physical Chemistry Chemical Physics</i> , <b>2018</b> , 20, 19682-19688	3.6	11
514	A new twist on sea silk: the peculiar protein ultrastructure of fan shell and pearl oyster byssus. <i>Soft Matter</i> , <b>2018</b> , 14, 5654-5664	3.6	16
513	On the Phase Diagram of Calcium Carbonate Solutions. <i>Advanced Materials Interfaces</i> , <b>2017</b> , 4, 1600076	4.6	24
512	Combined Experimental and Theoretical Approach to the Kinetics of Magnetite Crystal Growth from Primary Particles. <i>Journal of Physical Chemistry Letters</i> , <b>2017</b> , 8, 1132-1136	6.4	10
511	Fkbp10 Deletion in Osteoblasts Leads to Qualitative Defects in Bone. <i>Journal of Bone and Mineral Research</i> , <b>2017</b> , 32, 1354-1367	6.3	11
510	Mechanical behavior of idealized, stingray-skeleton-inspired tiled composites as a function of geometry and material properties. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2017</b> , 73, 86-101	4.1	14
509	Crack driving force in twisted plywood structures. <i>Acta Biomaterialia</i> , <b>2017</b> , 55, 349-359	10.8	40
508	Dendritic polyglycerol anions for the selective targeting of native and inflamed articular cartilage. <i>Journal of Materials Chemistry B</i> , <b>2017</b> , 5, 4754-4767	7.3	10

507	Control of Polymorph Selection in Amorphous Calcium Carbonate Crystallization by Poly(Aspartic Acid): Two Different Mechanisms. <i>Small</i> , <b>2017</b> , 13, 1603100	11	27
506	The Role of Titanium Surface Nanostructuring on Preosteoblast Morphology, Adhesion, and Migration. <i>Advanced Healthcare Materials</i> , <b>2017</b> , 6, 1601244	10.1	18
505	Ultrastructural, material and crystallographic description of endophytic masses - A possible damage response in shark and ray tessellated calcified cartilage. <i>Journal of Structural Biology</i> , <b>2017</b> , 198, 5-18	3.4	13
504	Nano-scale modulus mapping of biological composite materials: Theory and practice. <i>Progress in Materials Science</i> , <b>2017</b> , 87, 292-320	42.2	27
503	Multiscale Analysis of Mineralized Collagen Combining X-ray Scattering and Fluorescence with Raman Spectroscopy under Controlled Mechanical, Thermal, and Humidity Environments. <i>ACS Biomaterials Science and Engineering</i> , <b>2017</b> , 3, 2853-2859	5.5	4
502	3.26 Imaging Mineralized Tissues in Vertebrates <b>2017</b> , 549-578		1
501	Unraveling the Molecular Requirements for Macroscopic Silk Supercontraction. <i>ACS Nano</i> , <b>2017</b> , 11, 9750-9758	10.7	31
500	Multiscale characterization of the mineral phase at skeletal sites of breast cancer metastasis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2017</b> , 114, 10542-10547	11.5	41
499	Calcified cartilage or bone? Collagens in the tessellated endoskeletons of cartilaginous fish (sharks and rays). <i>Journal of Structural Biology</i> , <b>2017</b> , 200, 54-71	3.4	19
498	The small world of osteocytes: connectomics of the lacuno-canalicular network in bone. <i>New Journal of Physics</i> , <b>2017</b> , 19, 073019	2.9	54
497	Scaffold curvature-mediated novel biomineralization process originates a continuous soft tissue-to-bone interface. <i>Acta Biomaterialia</i> , <b>2017</b> , 60, 64-80	10.8	35
496	Pattern formation and collective effects in populations of magnetic microswimmers. <i>Journal Physics D: Applied Physics</i> , <b>2017</b> , 50, 11LT03	3	23
495	Ultrasound-driven titanium modification with formation of titania based nanofoam surfaces. <i>Ultrasonics Sonochemistry</i> , <b>2017</b> , 36, 146-154	8.9	15
494	Impregnation and Swelling of Wood with Salts: Ion Specific Kinetics and Thermodynamics Effects. <i>Advanced Materials Interfaces</i> , <b>2017</b> , 4, 1600437	4.6	11
493	Nano-channels in the spider fang for the transport of Zn ions to cross-link His-rich proteins pre-deposited in the cuticle matrix. <i>Arthropod Structure and Development</i> , <b>2017</b> , 46, 30-38	1.8	17
492	Combining Coherent Hard X-Ray Tomographies with Phase Retrieval to Generate Three-Dimensional Models of Forming Bone. <i>Frontiers in Materials</i> , <b>2017</b> , 4,	4	5
491	Relation between the Macroscopic Pattern of Elephant Ivory and Its Three-Dimensional Micro-Tubular Network. <i>PLoS ONE</i> , <b>2017</b> , 12, e0166671	3.7	17
490	Ultrastructural and developmental features of the tessellated endoskeleton of elasmobranchs (sharks and rays). <i>Journal of Anatomy</i> , <b>2016</b> , 229, 681-702	2.9	44



489	Solving conflicting functional requirements by hierarchical structuring examples from biological materials. <i>MRS Bulletin</i> , <b>2016</b> , 41, 667-671	3.2	20
488	The nanostructure of murine alveolar bone and its changes due to type 2 diabetes. <i>Journal of Structural Biology</i> , <b>2016</b> , 196, 223-231	3.4	4
487	Light-Induced Water Splitting Causes High-Amplitude Oscillation of pH-Sensitive Layer-by-Layer Assemblies on TiO. <i>Angewandte Chemie - International Edition</i> , <b>2016</b> , 55, 13001-13004	16.4	39
486	Light-Induced Water Splitting Causes High-Amplitude Oscillation of pH-Sensitive Layer-by-Layer Assemblies on TiO <sub>2</sub> . <i>Angewandte Chemie</i> , <b>2016</b> , 128, 13195-13198	3.6	2
485	The role of water on the structure and mechanical properties of a thermoplastic natural block co-polymer from squid sucker ring teeth. <i>Bioinspiration and Biomimetics</i> , <b>2016</b> , 11, 055003	2.6	12
484	A materials science vision of extracellular matrix mineralization. <i>Nature Reviews Materials</i> , <b>2016</b> , 1,	73.3	108
483	Ordering of protein and water molecules at their interfaces with chitin nano-crystals. <i>Journal of Structural Biology</i> , <b>2016</b> , 193, 124-31	3.4	20
482	The mechanics of tessellations - bioinspired strategies for fracture resistance. <i>Chemical Society Reviews</i> , <b>2016</b> , 45, 252-67	58.5	102
481	Honeycomb Actuators Inspired by the Unfolding of Ice Plant Seed Capsules. <i>PLoS ONE</i> , <b>2016</b> , 11, e0163506	9.6	18
480	A new treatment of transient grain growth. <i>Acta Materialia</i> , <b>2016</b> , 115, 442-447	8.4	9
479	Gas barrier properties of bio-inspired LAPONITE <sup>®</sup> -LC polymer hybrid films. <i>Bioinspiration and Biomimetics</i> , <b>2016</b> , 11, 035005	2.6	5
478	Aging Versus Postmenopausal Osteoporosis: Bone Composition and Maturation Kinetics at Actively-Forming Trabecular Surfaces of Female Subjects Aged 1 to 84 Years. <i>Journal of Bone and Mineral Research</i> , <b>2016</b> , 31, 347-57	6.3	45
477	Evidence for a Role for Nanoporosity and Pyridinoline Content in Human Mild Osteogenesis Imperfecta. <i>Journal of Bone and Mineral Research</i> , <b>2016</b> , 31, 1050-9	6.3	29
476	Ultrasonically Produced Porous Sponge Layer on Titanium to Guide Cell Behavior. <i>Advanced Engineering Materials</i> , <b>2016</b> , 18, 476-483	3.5	17
475	Switching the Stiffness of Polyelectrolyte Assembly by Light to Control Behavior of Supported Cells. <i>Macromolecular Bioscience</i> , <b>2016</b> , 16, 1422-1431	5.5	25
474	Inherent Role of Water in Damage Tolerance of the Prismatic Mineral/Organic Biocomposite in the Shell of Pinna Nobilis. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 3663-3669	15.6	12
473	Chemical, colloidal and mechanical contributions to the state of water in wood cell walls. <i>New Journal of Physics</i> , <b>2016</b> , 18, 083048	2.9	11
472	Function by internal structure-preface to the special issue on bioinspired hierarchical materials. <i>Bioinspiration and Biomimetics</i> , <b>2016</b> , 11, 060301	2.6	8



471	An Introduction into the Physics of Self-folding Thin Structures <b>2016</b> , 175-210		1
470	Bone mineralization pathways during the rapid growth of embryonic chicken long bones. <i>Journal of Structural Biology</i> , <b>2016</b> , 195, 82-92	3.4	50
469	Gradual conversion of cellular stress patterns into pre-stressed matrix architecture during in vitro tissue growth. <i>Journal of the Royal Society Interface</i> , <b>2016</b> , 13,	4.1	21
468	Water-Mediated Collagen and Mineral Nanoparticle Interactions Guide Functional Deformation of Human Tooth Dentin. <i>Chemistry of Materials</i> , <b>2016</b> , 28, 3416-3427	9.6	25
467	Mineral Formation in the Larval Zebrafish Tail Bone Occurs via an Acidic Disordered Calcium Phosphate Phase. <i>Journal of the American Chemical Society</i> , <b>2016</b> , 138, 14481-14487	16.4	49
466	Cooperative behavior of a sacrificial bond network and elastic framework in providing self-healing capacity in mussel byssal threads. <i>Journal of Structural Biology</i> , <b>2016</b> , 196, 329-339	3.4	41
465	Macromolecular recognition directs calcium ions to coccolith mineralization sites. <i>Science</i> , <b>2016</b> , 353, 590-3	33.3	67
464	BMP delivery complements the guiding effect of scaffold architecture without altering bone microstructure in critical-sized long bone defects: A multiscale analysis. <i>Acta Biomaterialia</i> , <b>2015</b> , 23, 282-294	10.8	38
463	Electron microscope analyses of the bio-silica basal spicule from the <i>Monorhaphis chuni</i> sponge. <i>Journal of Structural Biology</i> , <b>2015</b> , 191, 165-74	3.4	10
462	High resolution 3D laboratory x-ray tomography data of femora from young, 1-14 day old C57BL/6 mice. <i>Data in Brief</i> , <b>2015</b> , 4, 32-3	1.2	3
461	Availability of extracellular matrix biopolymers and differentiation state of human mesenchymal stem cells determine tissue-like growth in vitro. <i>Biomaterials</i> , <b>2015</b> , 60, 121-9	15.6	11
460	Fragility of Bone Material Controlled by Internal Interfaces. <i>Calcified Tissue International</i> , <b>2015</b> , 97, 201-139		61
459	The use of ultrasonic cavitation for near-surface structuring of robust and low-cost AlNi catalysts for hydrogen production. <i>Green Chemistry</i> , <b>2015</b> , 17, 2745-2749	10	31
458	Recombinant engineering of reversible cross-links into a resilient biopolymer. <i>Polymer</i> , <b>2015</b> , 69, 255-263.9		13
457	Micro- and nano-structural details of a spider's filter for substrate vibrations: relevance for low-frequency signal transmission. <i>Journal of the Royal Society Interface</i> , <b>2015</b> , 12, 20141111	4.1	30
456	Long bone maturation is driven by pore closing: A quantitative tomography investigation of structural formation in young C57BL/6 mice. <i>Acta Biomaterialia</i> , <b>2015</b> , 22, 92-102	10.8	15
455	Fast Magnetic Micropropellers with Random Shapes. <i>Nano Letters</i> , <b>2015</b> , 15, 7064-70	11.5	50
454	Bioinspired composites: Making a tooth mimic. <i>Nature Materials</i> , <b>2015</b> , 14, 1082-3	27	9

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6	Bioinspired Compartmentalization Strategy for Coating Polymers with Self-Organized Prismatic Films. <i>Chemistry of Materials</i> ,	9.6	2
5	Surface tension determines tissue shape and growth kinetics		1
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3	Sequence-specific response of collagen-mimetic peptides to osmotic pressure. <i>MRS Bulletin</i> ,1	3.2	0
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