In-Chul Um

List of Publications by Year
in descending order

69 papers	3,836 citations	136740 32 h-index	123241 61 g-index
69 all docs	69 docs citations	69 times ranked	3876 citing authors

#	Article	IF	Citations
1	Characterization of gelatin nanofiber prepared from gelatinâ€“formic acid solution. Polymer, 2005, 46, 5094-5102.	1.8	528
2	Structural characteristics and properties of the regenerated silk fibroin prepared from formic acid. International Journal of Biological Macromolecules, 2001, 29, 91-97.	3.6	380
3	Electro-Spinning and Electro-Blowing of Hyaluronic Acid. Biomacromolecules, 2004, 5, 1428-1436.	2.6	300
4	Physical properties of silk fibroin/chitosan blend films. Journal of Applied Polymer Science, 2001, 80, 928-934.	1.3	208
5	Nanofibrous membrane of wool keratose/silk fibroin blend for heavy metal ion adsorption. Journal of Membrane Science, 2007, 302, 20-26.	4.1	206
6	Structural and thermal characteristics of Antheraea pernyi silk fibroin/chitosan blend film. Polymer, 2001, 42, 6651-6656.	1.8	158
7	The role of formic acid in solution stability and crystallization of silk protein polymer. International Journal of Biological Macromolecules, 2003, 33, 203-213.	3.6	153
8	Wet spinning of silk polymer. International Journal of Biological Macromolecules, 2004, 34, 107-119.	3.6	150
9	Formation of water-resistant hyaluronic acid nanofibers by blowing-assisted electro-spinning and non-toxic post treatments. Polymer, 2005, 46, 4853-4867.	1.8	136
10	Molecular weight distribution and solution properties of silk fibroins with different dissolution conditions. International Journal of Biological Macromolecules, 2012, 51, 336-341.	3.6	97
11	Wet spinning of silk polymer. International Journal of Biological Macromolecules, 2004, 34, 89-105.	3.6	89
12	Effect of degumming methods on structural characteristics and properties of regenerated silk. International Journal of Biological Macromolecules, 2017, 104, 294-302.	3.6	69
13	Characteristics of TEMPO-oxidized cellulose fibril-based hydrogels induced by cationic ions and their properties. Cellulose, 2015, 22, 1993-2010.	2.4	68
14	Refining hot-water extracted silk sericin by ethanol-induced precipitation. International Journal of Biological Macromolecules, 2011, 48, 32-37.	3.6	67
15	Effect of degumming condition on the solution properties and electrospinnablity of regenerated silk solution. International Journal of Biological Macromolecules, 2013, 55, 161-168.	3.6	67
16	Effects of different Bombyx mori silkworm varieties on the structural characteristics and properties of silk. International Journal of Biological Macromolecules, 2015, 79, 943-951.	3.6	65
17	Effect of molecular weight and storage time on the wet- and electro-spinning of regenerated silk fibroin. Polymer Degradation and Stability, 2012, 97, 1060-1066.	2.7	59
18	Effects of solvent on the solution properties, structural characteristics and properties of silk sericin. International Journal of Biological Macromolecules, 2015, 78, 287-295.	3.6	53

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19	Antihyperlipidemic and Body Fat-Lowering Effects of Silk Proteins with Different Fibroin/Sericin Compositions in Mice Fed with High Fat Diet. Journal of Agricultural and Food Chemistry, 2011, 59, 4192-4197.	2.4	49
20	Metal ion adsorbability of electrospun wool keratose/silk fibroin blend nanofiber mats. Fibers and Polymers, 2007, 8, 271-277.	1.1	48
21	Effect of molecular weight and concentration on crystallinity and post drawing of wet spun silk fibroin fiber. Fibers and Polymers, 2014, 15, 153-160.	1.1	45
22	Effect of sericin concentration and ethanol content on gelation behavior, rheological properties, and sponge characteristics of silk sericin. European Polymer Journal, 2017, 93, 761-774.	2.6	43
23	Extraction conditions of Antheraea mylitta sericin with high yields and minimum molecular weight degradation. International Journal of Biological Macromolecules, 2013, 52, 59-65.	3.6	42
24	Effect of degumming ratio on wet spinning and post drawing performance of regenerated silk. International Journal of Biological Macromolecules, 2014, 67, 387-393.	3.6	42
25	Dissolution and wet spinning of silk fibroin using phosphoric acid/formic acid mixture solvent system. Journal of Applied Polymer Science, 2007, 105, 1605-1610.	1.3	40
26	Effect of molecular weight on electro-spinning performance of regenerated silk. International Journal of Biological Macromolecules, 2018, 106, 1166-1172.	3.6	40
27	Effect of molecular weight on the structure and mechanical properties of silk sericin gel, film, and sponge. International Journal of Biological Macromolecules, 2018, 119, 821-832.	3.6	35
28	Effect of shear viscosity on the preparation of sphere-like silk fibroin microparticles by electrospraying. International Journal of Biological Macromolecules, 2015, 79, 988-995.	3.6	34
29	Preparation of new natural silk non-woven fabrics by using adhesion characteristics of sericin and their characterization. International Journal of Biological Macromolecules, 2018, 106, 39-47.	3.6	34
30	The effect of casting solvent on the structural characteristics and miscibility of regenerated silk fibroin/Poly(vinyl alcohol) blends. Fibers and Polymers, 2007, 8, 579-585.	1.1	33
31	Effect of residual sericin on the structural characteristics and properties of regenerated silk films. International Journal of Biological Macromolecules, 2016, 89, 273-278.	3.6	33
32	Effects of degumming conditions on electro-spinning rate of regenerated silk. International Journal of Biological Macromolecules, 2013, 61, 50-57.	3.6	32
33	Effect of storage and drying temperature on the gelation behavior and structural characteristics of sericin. International Journal of Biological Macromolecules, 2015, 81, 936-941.	3.6	29
34	Examination of thermo-gelation behavior of HPMC and HEMC aqueous solutions using rheology. Korea Australia Rheology Journal, 2013, 25, 67-75.	0.7	25
35	Acceleration effect of sericin on shear-induced Î²-transition of silk fibroin. Polymer, 2009, 50, 4618-4625.	1.8	24
36	Relationship between rheology and electro-spinning performance of regenerated silk fibroin prepared using different degumming methods. Korea Australia Rheology Journal, 2014, 26, 119-125.	0.7	24

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37	A facile fabrication method and the boosted adsorption and photodegradation activity of CuO nanoparticles synthesized using a silk fibroin template. Journal of Industrial and Engineering Chemistry, 2017, 56, 335-341.	2.9	24
38	Miscibility, structural characteristics, and thermal behavior of wet spun regenerated silk fibroin/nylon 6 blend filaments. Fibers and Polymers, 2010, 11, 14-20.	1.1	20
39	Effect of RGDS and KRSR peptides immobilized on silk fibroin nanofibrous mats for cell adhesion and proliferation. Macromolecular Research, 2010, 18, 442-448.	1.0	20
40	Effects of electric field on the maximum electro-spinning rate of silk fibroin solutions. International Journal of Biological Macromolecules, 2017, 95, 8-13.	3.6	20
41	Electrospinning to Surpass White Natural Silk in Sunlight Rejection for Radiative Cooling. Advanced Photonics Research, 2021, 2, 2100008.	1.7	18
42	Evaluation of bone formation and membrane degradation in guided bone regeneration using a 4-hexylresorcinol-incorporated silk fabric membrane. Maxillofacial Plastic and Reconstructive Surgery, 2015, 37, 32.	0.7	17
43	Comparative evaluation of the hypolipidemic effects of hydroxyethyl methylcellulose (HEMC) and hydroxypropyl methylcellulose (HPMC) in high fat-fed mice. Food and Chemical Toxicology, 2012, 50, 130-134.	1.8	15
44	Preparation of Cellulose Nanofibril/Regenerated Silk Fibroin Composite Fibers. International Journal of Industrial Entomology, 2013, 26, 81-88.	0.1	15
45	Effectiveness of Woven Silk Dressing Materials on Full-skin Thickness Burn Wounds in Rat Model. Maxillofacial Plastic and Reconstructive Surgery, 2014, 36, 280-284.	0.7	14
46	Effect of Korean Bombyx mori variety on electro-spinning performance of regenerated silk fibroin. Fibers and Polymers, 2015, 16, 1935-1940.	1.1	14
47	A comparative study on the dielectric and dynamic mechanical relaxation behavior of the regenerated silk fibroin films. Macromolecular Research, 2009, 17, 785-790.	1.0	13
48	Effect of Relative Humidity on the Electrospinning Performance of Regenerated Silk Solution. Polymers, 2021, 13, 2479.	2.0	13
49	Antihyperglycemic and Antioxidative Effects of Hydroxyethyl Methylcellulose (HEMC) and Hydroxypropyl Methylcellulose (HPMC) in Mice Fed with a High Fat Diet. International Journal of Molecular Sciences, 2012, 13, 3738-3750.	1.8	12
50	Effect of Processing Conditions on the Homogeneity of Partially Degummed Silk Evaluated by FTIR Spectroscopy. International Journal of Industrial Entomology, 2013, 26, 54-60.	0.1	12
51	Antihyperlipidemic effects of hydroxyethyl methylcellulose with varying viscosity in mice fed with high fat diet. Food Research International, 2012, 48, 1-6.	2.9	11
52	Effect of Silkworm Variety on Characteristics of Raw Sericin in Silk. Fibers and Polymers, 2019, 20, 271-279.	1.1	11
53	Effect of Sericin Content on the Structural Characteristics and Properties of Electro-spun Regenerated Silk. Fibers and Polymers, 2018, 19, 507-514.	1.1	10
54	Effects of Fabrication Conditions on Structure and Properties of Mechanically Prepared Natural Silk Web and Non-Woven Fabrics. Polymers, 2021, 13, 1578.	2.0	10

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55	The Effect of Extraction Conditions and Film Side on the Molecular Conformation of Silk Sericin Film. International Journal of Industrial Entomology, 2013, 26, 113-118.	0.1	8
56	Hypoglycemic and antioxidative effects of hydroxyethyl methylcellulose in mice fed with high fat diet. Food and Chemical Toxicology, 2012, 50, 1716-1721.	1.8	7
57	Preparation, Structural Characteristics, and Properties of Airlaid Nonwoven Silk Fabric. Porrime, 2020, 44, 809-816.	0.0	7
58	Preparation, Structural Characterization, and Properties of Natural Silk Non-woven Fabrics from Different Silkworm Varieties. Fibers and Polymers, 2022, 23, 1130-1141.	1.1	7
59	Silk/Rayon Webs and Nonwoven Fabrics: Fabrication, Structural Characteristics, and Properties. International Journal of Molecular Sciences, 2022, 23, 7511.	1.8	7
60	Effect of Extraction Time on the Rheological Properties of Sericin Solutions and Gels. International Journal of Industrial Entomology, 2013, 27, 180-184.	0.1	6
61	Structure and properties of silk sericin obtained from different silkworm varieties. International Journal of Industrial Entomology, 2015, 30, 81-85.	0.1	5
62	The effect of ultrasonication on the micro-splitting of wool fiber. Fibers and Polymers, 2012, 13, 943-947.	1.1	4
63	Preparation, structure, and properties of cellulose nanofibril/silk sericin composite film. International Journal of Industrial Entomology, 2015, 31, 1-6.	0.1	3
64	Brush drawing multifunctional electronic textiles for human-machine interfaces. Current Applied Physics, 2022, 41, 131-138.	1.1	3
65	Effect of different Bombyx mori silkworm varieties on the wet spinning of silk fibroin. International Journal of Industrial Entomology, 2015, 30, 75-80.	0.1	2
66	Effect of centrifugation on the structure and properties of silk sericin. International Journal of Industrial Entomology, 2016, 33, 144-148.	0.1	1
67	Hemicellulose Removal and Crystalline Structure Transition of Flax Fiber with Alkali Treatment. Textile Science and Engineering, 2012, 49, 271-278.	0.4	1
68	Effect of treatment temperature on mechanical properties of silk textiles made with silk/polyurethane core-spun yarn. International Journal of Industrial Entomology, 2016, 33, 108-112.	0.1	1
69	Effect of degumming on structure and mechanical properties of silk textile made with silk/polyurethane core-spun yarn. International Journal of Industrial Entomology, 2016, 33, 132-137.	0.1	0