Ihtasham Ur Rehman

List of Publications by Year
in descending order

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Version: 2024-02-01

112 papers	8,517 citations	81743 39 h-index	46693 89 g-index
118 all docs	118 docs citations	118 times ranked	11742 citing authors

#	Article	IF	Citations
1	Raman Spectroscopy of Biological Tissues. Applied Spectroscopy Reviews, 2007, 42, 493-541.	3.4	1,857
2	Fourier Transform Infrared (FTIR) Spectroscopy of Biological Tissues. Applied Spectroscopy Reviews, 2008, 43, 134-179.	3.4	1,241
3	Raman Spectroscopy of Biological Tissues. Applied Spectroscopy Reviews, 2015, 50, 46-111.	3.4	491
4	Advances in Fourier transform infrared (FTIR) spectroscopy of biological tissues. Applied Spectroscopy Reviews, 2017, 52, 456-506.	3.4	319
5	FTIR analysis of natural and synthetic collagen. Applied Spectroscopy Reviews, 2018, 53, 703-746.	3.4	314
6	Electrospinning of Chitosan-Based Solutions for Tissue Engineering and Regenerative Medicine. International Journal of Molecular Sciences, 2018, 19, 407.	1.8	236
7	Role of Salivary Biomarkers in Oral Cancer Detection. Advances in Clinical Chemistry, 2018, 86, 23-70.	1.8	161
8	Electrospun polyurethane/hydroxyapatite bioactive Scaffolds for bone tissue engineering: The role of solvent and hydroxyapatite particles. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 39, 95-110.	1.5	145
9	Modification of conventional glass-ionomer cements with N-vinylpyrrolidone containing polyacids, nano-hydroxy and fluoroapatite to improve mechanical properties. Dental Materials, 2008, 24, 1381-1390.	1.6	142
10	Auxetic oesophageal stents: structure and mechanical properties. Journal of Materials Science: Materials in Medicine, 2014, 25, 527-553.	1.7	139
11	Recent concepts in biodegradable polymers for tissue engineering paradigms: a critical review. International Materials Reviews, 2019, 64, 91-126.	9.4	133
12	Modifications in Glass Ionomer Cements: Nano-Sized Fillers and Bioactive Nanoceramics. International Journal of Molecular Sciences, 2016, 17, 1134.	1.8	118
13	Potential of electrospun chitosan fibers as a surface layer in functionally graded GTR membrane for periodontal regeneration. Dental Materials, 2017, 33, 71-83.	1.6	114
14	Applications of Raman Spectroscopy in Dentistry: Analysis of Tooth Structure. Applied Spectroscopy Reviews, 2015, 50, 332-350.	3.4	100
15	Raman Spectroscopy of Natural Bone and Synthetic Apatites. Applied Spectroscopy Reviews, 2013, 48, 329-355.	3.4	99
16	Freeze gelated porous membranes for periodontal tissue regeneration. Acta Biomaterialia, 2015, 23, 317-328.	4.1	95
17	An Auxetic structure configured as oesophageal stent with potential to be used for palliative treatment of oesophageal cancer; development and in vitro mechanical analysis. Journal of Materials Science: Materials in Medicine, 2011, 22, 2573-2581.	1.7	94
18	Preparation and characterization of a novel bioactive restorative composite based on covalently coupled polyurethaneâ€“nanohydroxyapatite fibres. Acta Biomaterialia, 2008, 4, 1275-1287.	4.1	93

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19	Dietary flavonoids inhibit the anticancer effects of the proteasome inhibitor bortezomib. Blood, 2008, 112, 3835-3846.	0.6	83
20	Vibrational spectroscopy of selective dental restorative materials. Applied Spectroscopy Reviews, 2017, 52, 507-540.	3.4	83
21	An update on glass fiber dental restorative composites: A systematic review. Materials Science and Engineering C, 2015, 47, 26-39.	3.8	78
22	In- vitro and in -vivo degradation studies of freeze gelated porous chitosan composite scaffolds for tissue engineering applications. Polymer Degradation and Stability, 2017, 136, 31-38.	2.7	74
23	Raman spectroscopic analysis differentiates between breast cancer cell lines. Journal of Raman Spectroscopy, 2015, 46, 421-427.	1.2	68
24	Raman spectroscopic analysis of breast cancer tissues: identifying differences between normal, invasive ductal carcinoma and ductal carcinoma in situ of the breast tissue. Journal of Raman Spectroscopy, 2007, 38, 1345-1351.	1.2	61
25	Surface modification of aramid fibres by graphene oxide nano-sheets for multiscale polymer composites. Surface and Coatings Technology, 2014, 258, 458-466.	2.2	59
26	Fabrication and in vivo evaluation of hydroxyapatite/carbon nanotube electrospun fibers for biomedical/dental application. Materials Science and Engineering C, 2017, 80, 387-396.	3.8	56
27	Vibrational Spectroscopy for Tissue Analysis. , 0, , .		56
28	Investigation of ionic liquids as a pretreatment solvent for extraction of collagen biopolymer from waste fish scales using COSMO-RS and experiment. Journal of Molecular Liquids, 2017, 232, 258-264.	2.3	54
29	Synthesis of piroxicam loaded novel electrospun biodegradable nanocomposite scaffolds for periodontal regeneration. Materials Science and Engineering C, 2015, 56, 104-113.	3.8	53
30	Preliminary fabrication and characterization of electron beam melted Tiâ€“6Alâ€“4V customized dental implant. Saudi Journal of Biological Sciences, 2017, 24, 787-796.	1.8	50
31	Advances of Proteomic Sciences in Dentistry. International Journal of Molecular Sciences, 2016, 17, 728.	1.8	49
32	Characterisation of structural changes in collagen with Raman spectroscopy. Applied Spectroscopy Reviews, 2019, 54, 509-542.	3.4	49
33	Supercritical fluid assisted impregnation of indomethacin into chitosan thermosets for controlled release applications. International Journal of Pharmaceutics, 2006, 315, 93-98.	2.6	48
34	Production of chitosan PVA PCL hydrogels to bind heparin and induce angiogenesis. International Journal of Polymeric Materials and Polymeric Biomaterials, 2016, 65, 466-476.	1.8	48
35	Oxygen Generating Polymeric Nano Fibers That Stimulate Angiogenesis and Show Efficient Wound Healing in a Diabetic Wound Model . International Journal of Nanomedicine, 2020, Volume 15, 3511-3522.	3.3	48
36	Fourier Transform Infrared Spectroscopic Analysis of Breast Cancer Tissues; Identifying Differences between Normal Breast, Invasive Ductal Carcinoma, and Ductal Carcinoma In Situ of the Breast. Applied Spectroscopy Reviews, 2010, 45, 355-368.	3.4	46

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37	Triethyl orthoformate mediated a novel crosslinking method for the preparation of hydrogels for tissue engineering applications: characterization and in vitro cytocompatibility analysis. Materials Science and Engineering C, 2015, 56, 154-164.	3.8	46
38	Novel meloxicam releasing electrospun polymer/ceramic reinforced biodegradable membranes for periodontal regeneration applications. Materials Science and Engineering C, 2016, 64, 148-156.	3.8	46
39	Applications of machine learning in spectroscopy. Applied Spectroscopy Reviews, 2021, 56, 733-763.	3.4	46
40	An application of ionic liquid for preparation of homogeneous collagen and alginate hydrogels for skin dressing. Journal of Molecular Liquids, 2017, 243, 720-725.	2.3	43
41	Spectroscopy as a tool for detection and monitoring of Coronavirus (COVID-19). Expert Review of Molecular Diagnostics, 2020, 20, 647-649.	1.5	42
42	Surface-modified polymeric nanoparticles for drug delivery to cancer cells. Expert Opinion on Drug Delivery, 2021, 18, 1-24.	2.4	40
43	Thyroxin releasing chitosan/collagen based smart hydrogels to stimulate neovascularization. Materials and Design, 2017, 133, 416-425.	3.3	39
44	Controlled Release of Chlorhexidine Diacetate from a Porous Methacrylate System: Supercritical Fluid Assisted Foaming and Impregnation. Journal of Pharmaceutical Sciences, 2007, 96, 2048-2056.	1.6	38
45	Bi-layered Î±-tocopherol acetate loaded membranes for potential wound healing and skin regeneration. Materials Science and Engineering C, 2019, 101, 438-447.	3.8	38
46	Identification of anti-cancer potential of doxazocin: Loading into chitosan based biodegradable hydrogels for on-site delivery to treat cervical cancer. Materials Science and Engineering C, 2018, 82, 102-109.	3.8	37
47	Raman spectroscopy of breast cancer. Applied Spectroscopy Reviews, 2020, 55, 439-475.	3.4	36
48	Protein adsorption capability on polyurethane and modified-polyurethane membrane for periodontal guided tissue regeneration applications. Materials Science and Engineering C, 2016, 68, 267-275.	3.8	34
49	In-Situ Forming pH and Thermosensitive Injectable Hydrogels to Stimulate Angiogenesis: Potential Candidates for Fast Bone Regeneration Applications. International Journal of Molecular Sciences, 2020, 21, 1633.	1.8	33
50	Synthesis and characterisation of enhanced barrier polyurethane for encapsulation of implantable medical devices. Journal of Materials Science: Materials in Medicine, 2009, 20, 1803-1814.	1.7	32
51	A new synthetic methodology for the preparation of biocompatible and organo-soluble barbituric- and thiobarbituric acid based chitosan derivatives for biomedical applications. Materials Science and Engineering C, 2016, 66, 156-163.	3.8	32
52	Effect of calcium hydroxide on mechanical strength and biological properties of bioactive glass. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 61, 617-626.	1.5	32
53	Dental materials for cleft palate repair. Materials Science and Engineering C, 2016, 61, 1018-1028.	3.8	31
54	Development of K-doped ZnO nanoparticles encapsulated crosslinked chitosan based new membranes to stimulate angiogenesis in tissue engineered skin grafts. International Journal of Biological Macromolecules, 2018, 120, 721-728.	3.6	31

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55	Characterization and drug release investigation of amorphous drugâ€“hydroxypropyl methylcellulose composites made via supercritical carbon dioxide assisted impregnation. Journal of Pharmaceutical and Biomedical Analysis, 2008, 48, 1112-1119.	1.4	30
56	A study of the effect of precursors on physical and biological properties of mesoporous bioactive glass. Journal of Materials Science, 2015, 50, 1794-1804.	1.7	29
57	Heparin binding chitosan derivatives for production of pro-angiogenic hydrogels for promoting tissue healing. Materials Science and Engineering C, 2017, 74, 347-356.	3.8	28
58	Auxetic polyurethane stents and stent-grafts for the palliative treatment of squamous cell carcinomas of the proximal and mid oesophagus: A novel fabrication route. Journal of Manufacturing Systems, 2015, 37, 375-395.	7.6	27
59	Bioresorbable antibacterial PCLâ€PLAâ€nHA composite membranes for oral and maxillofacial defects. Polymer Composites, 2019, 40, 1564-1575.	2.3	27
60	Tri-layered functionally graded membrane for potential application in periodontal regeneration. Materials Science and Engineering C, 2019, 103, 109812.	3.8	27
61	Thyroxine-loaded chitosan/carboxymethyl cellulose/hydroxyapatite hydrogels enhance angiogenesis in in-ovo experiments. International Journal of Biological Macromolecules, 2020, 145, 1162-1170.	3.6	27
62	Synthesis and characterizations of a fluoride-releasing dental restorative material. Materials Science and Engineering C, 2013, 33, 3458-3464.	3.8	26
63	Biological behavior of bioactive glasses and their composites. RSC Advances, 2016, 6, 70197-70214.	1.7	26
64	Structural, Surface, in vitro Bacterial Adhesion and Biofilm Formation Analysis of Three Dental Restorative Composites. Materials, 2015, 8, 3221-3237.	1.3	25
65	A comparison of the mechanical properties of a modified silorane based dental composite with those of commercially available composite material. Dental Materials, 2013, 29, e53-e59.	1.6	24
66	Development of a Dewaxing Protocol for Tissue-Engineered Models of the Oral Mucosa Used for Raman Spectroscopic Analysis. Applied Spectroscopy Reviews, 2014, 49, 614-617.	3.4	24
67	Amino acids loaded chitosan/collagen based new membranes stimulate angiogenesis in chorioallantoic membrane assay. International Journal of Biological Macromolecules, 2019, 140, 401-406.	3.6	24
68	Advancing cancer diagnostics with artificial intelligence and spectroscopy: identifying chemical changes associated with breast cancer. Expert Review of Molecular Diagnostics, 2019, 19, 929-940.	1.5	24
69	Low-Temperature Synthesis and Surface Modification of High Surface Area Calcium Hydroxyapatite Nanorods Incorporating Organofunctionalized Surfaces. Journal of Physical Chemistry C, 2016, 120, 29069-29076.	1.5	23
70	Hydroxyapatite-Integrated, Heparin- and Glycerol-Functionalized Chitosan-Based Injectable Hydrogels with Improved Mechanical and Proangiogenic Performance. International Journal of Molecular Sciences, 2022, 23, 5370.	1.8	23
71	Raman spectroscopy can discriminate between normal, dysplastic and cancerous oral mucosa: a tissue-engineering approach. Journal of Tissue Engineering and Regenerative Medicine, 2017, 11, 3253-3262.	1.3	22
72	Triethyl orthoformate covalently cross-linked chitosan-(poly vinyl) alcohol based biodegradable scaffolds with heparin-binding ability for promoting neovascularisation. Journal of Biomaterials Applications, 2016, 31, 582-593.	1.2	21

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73	Efficient drug delivery system for bone repair by tuning the surface of hydroxyapatite particles. RSC Advances, 2016, 6, 104969-104978.	1.7	20
74	Mapping Nanostructural Variations in Silk by Secondary Electron Hyperspectral Imaging. Advanced Materials, 2017, 29, 1703510.	11.1	20
75	Addition of 2-deoxy-<scp>d</scp>-ribose to clinically used alginate dressings stimulates angiogenesis and accelerates wound healing in diabetic rats. Journal of Biomaterials Applications, 2019, 34, 463-475.	1.2	20
76	Raman Spectroscopy Can Detect and Monitor Cancer at Cellular Level: Analysis of Resistant and Sensitive Subtypes of Testicular Cancer Cell Lines. Applied Spectroscopy Reviews, 2012, 47, 571-581.	3.4	19
77	Studies on Tolfenamic Acidâ€“Chitosan Intermolecular Interactions: Effect of pH, Polymer Concentration and Molecular Weight. AAPS PharmSciTech, 2013, 14, 870-879.	1.5	19
78	Boron for tissue regeneration-itâ€™s loading into chitosan/collagen hydrogels and testing on chorioallantoic membrane to study the effect on angiogenesis. International Journal of Polymeric Materials and Polymeric Biomaterials, 2020, 69, 525-534.	1.8	19
79	Synthesis and characterization of cellulose/hydroxyapatite based dental restorative composites. Journal of Biomaterials Science, Polymer Edition, 2020, 31, 1806-1819.	1.9	19
80	Biomimetic PLGA/Strontium-Zinc Nano Hydroxyapatite Composite Scaffolds for Bone Regeneration. Journal of Functional Biomaterials, 2022, 13, 13.	1.8	19
81	Biodegradable Polyurethanes: Biodegradable Low Adherence Films for the Prevention of Adhesions after Surgery. Journal of Biomaterials Applications, 1996, 11, 182-257.	1.2	17
82	Structural, mechanical, and biocompatibility analyses of a novel dental restorative nanocomposite. Journal of Applied Polymer Science, 2013, 127, 439-447.	1.3	17
83	Preparation and characterization of bioactive composites and fibers for dental applications. Dental Materials, 2014, 30, e253-e263.	1.6	16
84	Development of collagen/PVA composites patches for osteochondral defects using a green processing of ionic liquid. International Journal of Polymeric Materials and Polymeric Biomaterials, 2019, 68, 590-596.	1.8	16
85	Sterilization effects on the handling and degradation properties of calcium phosphate cements containing poly (_{D,L}â€lacticâ€coâ€glycolic acid) porogens and carboxymethyl cellulose. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2019, 107, 2216-2228.	1.6	16
86	Thyroxine impregnated chitosan-based dressings stimulate angiogenesis and support fast wounds healing in rats: Potential clinical candidates. International Journal of Biological Macromolecules, 2020, 160, 296-306.	3.6	16
87	Analyzing normal proliferating, hypoxic and necrotic regions of T-47D human breast cancer spheroids using Raman spectroscopy. Applied Spectroscopy Reviews, 2017, 52, 909-924.	3.4	14
88	Development and Characterization of Novel Polyurethane Films Impregnated with Tolfenamic Acid for Therapeutic Applications. BioMed Research International, 2013, 2013, 1-8.	0.9	13
89	Fabrication, in vitro and in vivo studies of bilayer composite membrane for periodontal guided tissue regeneration. Journal of Biomaterials Applications, 2019, 33, 967-978.	1.2	13
90	(Hydroxypropyl)methylcellulose Mediated Synthesis of Highly Porous Composite Scaffolds for Trabecular Bone Repair Applications. Science of Advanced Materials, 2015, 7, 1177-1186.	0.1	13

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91	Structural and in vitro adhesion analysis of a novel covalently coupled bioactive composite. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2012, 100B, 239-248.	1.6	11
92	Raman spectroscopy detects melanoma and the tissue surrounding melanoma using tissue-engineered melanoma models. Applied Spectroscopy Reviews, 2016, 51, 263-277.	3.4	11
93	Role of artificial intelligence and vibrational spectroscopy in cancer diagnostics. Expert Review of Molecular Diagnostics, 2020, 20, 749-755.	1.5	11
94	Synthesis and <I>In-Vitro</I> Analysis of Degradative Resistance of a Novel Bioactive Composite. Journal of Bionanoscience, 2008, 2, 75-88.	0.4	10
95	The use of vibrational spectroscopy to study the pathogenesis multiple sclerosis and other neurological conditions. Applied Spectroscopy Reviews, 2017, 52, 868-882.	3.4	9
96	Heparinized chitosan/hydroxyapatite scaffolds stimulate angiogenesis. Functional Composite Materials, 2020, 1, .	0.9	9
97	Ceramic Stereolithography of Bioactive Glasses: Influence of Resin Composition on Curing Behavior and Green Body Properties. Biomedicines, 2022, 10, 395.	1.4	9
98	Application of Nanomaterials in Dentistry. , 2018, , 319-336.		7
99	Effect of pH, polymer concentration and molecular weight on the physical state properties of tolfenamic acid. Pharmaceutical Development and Technology, 2015, 20, 352-360.	1.1	6
100	Elucidating the chemical and structural composition of breast cancer using Raman micro-spectroscopy. EXCLI Journal, 2021, 20, 1118-1132.	0.5	5
101	Effect of Beverages on Viscoelastic Properties of Resin-Based Dental Composites. Materials, 2015, 8, 2863-2872.	1.3	4
102	A comparative finite elemental analysis of glass abutment supported and unsupported cantilever fixed partial denture. Dental Materials, 2015, 31, 514-521.	1.6	4
103	Applications of Raman spectroscopy in dentistry part II: Soft tissue analysis. Applied Spectroscopy Reviews, 2016, 51, 799-821.	3.4	3
104	Study of wettability and cell viability of H implanted stainless steel. Materials Research Express, 2018, 5, 036509.	0.8	3
105	Surface-grafted remedial hydroxyapatite nanoparticles to avoid operational infections. Monatshefte FÃ¼r Chemie, 2019, 150, 605-615.	0.9	3
106	Fabrication of dual drug loaded bilayered chitosan based composite scaffolds as osteochondral substitutes and evaluation of in vitro cell response using the MC3T3 pre-osteoblast cell line. Cellulose, 2020, 27, 2253-2266.	2.4	3
107	Spectroscopic techniques as potential screening tools for preterm birth: A review and an exploratory study. Applied Spectroscopy Reviews, 2019, 54, 348-367.	3.4	1
108	Synthesis and wound healing performance of new <scp>waterâ€soluble</scp> chitosan derivatives. Journal of Applied Polymer Science, 2022, 139, 51770.	1.3	1

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109	Incidence and management of cleft lip and palate in Pakistan. JPMA the Journal of the Pakistan Medical Association, 2019, 69, 632-639.	0.1	1
110	A study of the comparative effect of cerium oxide and cerium peroxide on stimulation of angiogenesis: Design and synthesis of proâ€angiogenic chitosan/collagen hydrogels. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2022, 110, 2751-2762.	1.6	1
111	Incorporation of nanoparticles in glass ionomer cements: Clinical applications, properties, and future perspectives. , 2019, , 113-138.		0
112	A simple and efficient method to prepare exfoliated and reduced graphene nanosheets by vacuum oven. Journal of Materials Research, 2021, 36, 3031-3040.	1.2	0