

Sandra DirÄ“

List of Publications by Year in descending order

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124
papers

2,694
citations

186265

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all docs

124
docs citations

124
times ranked

3168
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#	ARTICLE	IF	CITATIONS
1	Inorganic gels for immobilization of biocatalysts: inclusion of invertase-active whole cells of yeast (<i>Saccharomyces cerevisiae</i>) into thin layers of SiO ₂ gel deposited on glass sheets. <i>Journal of Molecular Catalysis</i> , 1989, 57, L13-L16.	1.2	129
2	Sol-gel synthesis of siloxane-oxide hybrid coatings [Si(CH ₃) ₂ O-MOx: M = Si, Ti, Zr, Al] with luminescent properties. <i>Journal of Materials Chemistry</i> , 1992, 2, 239-244.	6.7	118
3	Synthesis and characterization of strontium-substituted hydroxyapatite nanoparticles for bone regeneration. <i>Materials Science and Engineering C</i> , 2017, 71, 653-662.	7.3	117
4	Entrapment of viable microorganisms by SiO ₂ sol-gel layers on glass surfaces: Trapping, catalytic performance and immobilization durability of <i>Saccharomyces cerevisiae</i> . <i>Journal of Biotechnology</i> , 1993, 30, 197-210.	3.8	111
5	XPS studies of SiO ₂ -TiO ₂ powders prepared by sol-gel process. <i>Applied Surface Science</i> , 1993, 70-71, 230-234.	6.1	95
6	Electrical conductivity of tin oxide films prepared by the sol-gel method. <i>Journal of Non-Crystalline Solids</i> , 1990, 121, 365-369.	3.1	78
7	Solid state NMR and IR characterization of wood polymer structure in relation to tree provenance. <i>Carbohydrate Polymers</i> , 2015, 117, 710-721.	10.2	78
8	MoS ₂ Based Photodetectors: A Review. <i>Sensors</i> , 2021, 21, 2758.	3.8	77
9	Influence of the polymer architecture on the high temperature behavior of SiCO glasses: A comparison between linear- and cyclic-derived precursors. <i>Journal of Non-Crystalline Solids</i> , 2010, 356, 132-140.	3.1	65
10	Immobilization of yeast and bacteria cells in alginate microbeads coated with silica membranes: procedures, physico-chemical features and bioactivity. <i>Journal of Materials Chemistry</i> , 2008, 18, 4839.	6.7	59
11	Effect of Na-Montmorillonite sonication on the protective properties of hybrid silica coatings. <i>Electrochimica Acta</i> , 2014, 124, 90-99.	5.2	58
12	ZnO nanoparticles anchored to silica filler. A curing accelerator for isoprene rubber composites. <i>Chemical Engineering Journal</i> , 2015, 275, 245-252.	12.7	55
13	In Situ 3D Printing: Opportunities with Silk Inks. <i>Trends in Biotechnology</i> , 2021, 39, 719-730.	9.3	54
14	Silicon Oxycarbide Glasses from Sol-Gel Precursors. <i>Materials Research Society Symposia Proceedings</i> , 1992, 271, 789.	0.1	53
15	Pyrolysis Chemistry of Sol-Gel-Derived Poly(dimethylsiloxane)-Zirconia Nanocomposites. Influence of Zirconium on Polymer-to-Ceramic Conversion. <i>Chemistry of Materials</i> , 1998, 10, 268-278.	6.7	46
16	Docosane-Organosilica Microcapsules for Structural Composites with Thermal Energy Storage/Release Capability. <i>Materials</i> , 2019, 12, 1286.	2.9	45
17	Influence of Ce ³⁺ doping on molecular organization of Si-based organic/inorganic sol-gel layers for corrosion protection. <i>Applied Surface Science</i> , 2017, 414, 82-91.	6.1	42
18	Micro- and nano-hydroxyapatite as active reinforcement for soft biocomposites. <i>International Journal of Biological Macromolecules</i> , 2015, 72, 199-209.	7.5	41

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19	Unsupported SiO ₂ -based organic-inorganic membranes. <i>Journal of Materials Chemistry</i> , 1997, 7, 67-73.	6.7	39
20	Structural and Microstructural Evolution During Pyrolysis of Hybrid Polydimethylsiloxane-Titania Nanocomposites. <i>Journal of Sol-Gel Science and Technology</i> , 2005, 34, 53-62.	2.4	38
21	Thermal evolution and crystallisation of polydimethylsiloxane-zirconia nanocomposites prepared by the sol-gel method. <i>Journal of the European Ceramic Society</i> , 1999, 19, 2849-2858.	5.7	37
22	Synthesis and characterization of siloxane-titania materials. <i>Journal of Non-Crystalline Solids</i> , 1992, 147-148, 62-66.	3.1	36
23	Size-controlled self-assembly of anisotropic sepiolite fibers in rubber nanocomposites. <i>Applied Clay Science</i> , 2018, 152, 51-64.	5.2	35
24	Effect of functional groups on condensation and properties of sol-gel silica nanoparticles prepared by direct synthesis from organoalkoxysilanes. <i>Materials Chemistry and Physics</i> , 2011, 126, 909-917.	4.0	34
25	A comparative analysis of surface structure and surface tension of hybrid silica films. <i>Journal of Non-Crystalline Solids</i> , 1997, 209, 51-60.	3.1	32
26	Sol-gel precursors: a spectroscopic study of transesterification reactions between silicon and titanium alkoxides. <i>Journal of Non-Crystalline Solids</i> , 1994, 167, 29-36.	3.1	31
27	Hydrophobic siloxane paper coatings: the effect of increasing methyl substitution. <i>Journal of Sol-Gel Science and Technology</i> , 2012, 62, 441-452.	2.4	30
28	Title is missing!. <i>Magyar Árvad Képzelmények</i> , 2001, 66, 37-46.	1.4	29
29	Processing Influence on Molecular Assembling and Structural Conformations in Silk Fibroin: Elucidation by Solid-State NMR. <i>ACS Biomaterials Science and Engineering</i> , 2016, 2, 758-767.	5.2	29
30	Effect of functionalized graphene oxide concentration on the corrosion resistance properties provided by cataphoretic acrylic coatings. <i>Materials Chemistry and Physics</i> , 2020, 239, 121984.	4.0	29
31	New Monofunctional POSS and Its Utilization as Dewetting Additive in Methacrylate Based Free-Standing Films. <i>Chemistry of Materials</i> , 2009, 21, 4163-4171.	6.7	27
32	Sol-gel synthesis of polymer-YSZ hybrid materials for SOFC technology. <i>Journal of the European Ceramic Society</i> , 2004, 24, 1371-1374.	5.7	26
33	Hybrid SiO ₂ @POSS nanofiller: a promising reinforcing system for rubber nanocomposites. <i>Materials Chemistry Frontiers</i> , 2017, 1, 1441-1452.	5.9	26
34	Electrostatic bellow muscle actuators and energy harvesters that stack up. <i>Science Robotics</i> , 2021, 6, .	17.6	26
35	Silk Fibroin Porous Scaffolds Loaded with a Slow-Releasing Hydrogen Sulfide Agent (GY4137) for Applications of Tissue Engineering. <i>ACS Biomaterials Science and Engineering</i> , 2018, 4, 2956-2966.	5.2	25
36	The development of sol-gel derived TiO ₂ thin films and corresponding memristor architectures. <i>RSC Advances</i> , 2017, 7, 1654-1663.	3.6	24

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37	Synthesis and characterization of the first transparent silicon oxycarbide aerogel obtained through H ₂ decarbonization. <i>Journal of Materials Chemistry A</i> , 2015, 3, 24405-24413.	10.3	23
38	Versatile and Scalable Strategy To Grow Sol-Gel Derived 2H-MoS ₂ Thin Films with Superior Electronic Properties: A Memristive Case. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 34392-34400.	8.0	22
39	Unsupported SiO ₂ -based organic-inorganic membranes. <i>Journal of Materials Chemistry</i> , 1997, 7, 919-922.	6.7	21
40	Hybrid organic-inorganic materials using zirconium based NBBs and vinyl trimethoxysilane: Effect of pre-hydrolysis of silane. <i>Polymer</i> , 2010, 51, 832-841.	3.8	21
41	Properties of anion exchange membrane based on polyamine: Effect of functionalized silica particles prepared by sol-gel method. <i>Solid State Ionics</i> , 2018, 322, 85-92.	2.7	21
42	Unveiling the hybrid interface in polymer nanocomposites enclosing silsesquioxanes with tunable molecular structure: Spectroscopic, thermal and mechanical properties. <i>Journal of Colloid and Interface Science</i> , 2018, 512, 609-617.	9.4	20
43	Effects of Graphene-Based Fillers on Cathodic Delamination and Abrasion Resistance of Cataphoretic Organic Coatings. <i>Coatings</i> , 2020, 10, 602.	2.6	18
44	A Bio-inspired Multifunctionalized Silk Fibroin. <i>ACS Biomaterials Science and Engineering</i> , 2021, 7, 507-516.	5.2	18
45	Structural evolution during pyrolysis of sol-gel derived hybrid materials. <i>Journal of Sol-Gel Science and Technology</i> , 1994, 2, 139-142.	2.4	17
46	Synthesis of Ni metal particles by reaction between bis(cyclooctadiene)nickel(0) and sol-gel SiO ₂ modified with Si-H groups. <i>Journal of Materials Chemistry</i> , 2001, 11, 678-683.	6.7	17
47	Chemical modification and structural rearrangements of polyketone-based polymer membrane. <i>Journal of Applied Polymer Science</i> , 2017, 134, 45485.	2.6	17
48	Design of a Zn Single-Site Curing Activator for a More Sustainable Sulfur Cross-Link Formation in Rubber. <i>Industrial & Engineering Chemistry Research</i> , 2021, 60, 10180-10192.	3.7	17
49	Sol-gel synthesis and characterization of undoped and Al-doped ZnO thin films for memristive application. <i>AIP Advances</i> , 2016, 6, .	1.3	16
50	Effect of the Organic Functional Group on the Grafting Ability of Trialkoxysilanes onto Graphene Oxide: A Combined NMR, XRD, and ESR Study. <i>Materials</i> , 2019, 12, 3828.	2.9	16
51	Pyrolysis study of sol-gel derived zirconia by TG-GC-MS. <i>Journal of Thermal Analysis and Calorimetry</i> , 2005, 81, 407-415.	3.6	15
52	Si and Zr based NBBs for hybrid O/I macromolecular materials starting by preformed zirconium oxo-clusters. <i>Journal of Sol-Gel Science and Technology</i> , 2008, 48, 168-171.	2.4	15
53	Influence of synthesis conditions on the cross-link architecture of silsesquioxanes prepared by in situ water production route. <i>Journal of Sol-Gel Science and Technology</i> , 2011, 60, 236-245.	2.4	15
54	A novel non-aqueous sol-gel route for the in situ synthesis of high loaded silica-rubber nanocomposites. <i>Soft Matter</i> , 2014, 10, 2234-2244.	2.7	15

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55	Morphologic, structural, and optical characterization of sol-gel derived TiO ₂ thin films for memristive devices. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2015, 12, 192-196.	0.8	15
56	Tailoring the Dielectric and Mechanical Properties of Polybutadiene Nanocomposites by Using Designed Ladder-like Polysilsesquioxanes. <i>ACS Applied Nano Materials</i> , 2018, 1, 3817-3828.	5.0	15
57	Features and application of coupled cold plasma and photocatalysis processes for decontamination of water. <i>Chemosphere</i> , 2021, 262, 128336.	8.2	15
58	Phase separation in gel-derived materials, separation and crystallization of SnO ₂ within an amorphous SiO ₂ matrix. <i>Journal of Materials Research</i> , 1992, 7, 435-443.	2.6	14
59	Corrosion protection properties of functionalised graphene-acrylate coatings produced via cataphoretic deposition. <i>Progress in Organic Coatings</i> , 2019, 136, 105261.	3.9	14
60	Graphene-Based Reinforcing Filler for Double-Layer Acrylic Coatings. <i>Materials</i> , 2020, 13, 4499.	2.9	14
61	Structural Investigation of Sol-Gel-Derived Hybrid Siloxane-Oxide Materials Using ²⁹ Si MAS-NMR Spectroscopy. <i>Materials Research Society Symposia Proceedings</i> , 1992, 286, 289.	0.1	13
62	Hybrid organic/inorganic materials for photonic applications via assembling of nanostructured molecular units. <i>Journal of Sol-Gel Science and Technology</i> , 2008, 48, 217-223.	2.4	13
63	A low-cost method for producing high-performance nanocomposite thin-films made from silica and CNTs on cellulose substrates. <i>Journal of Materials Science</i> , 2008, 43, 4862-4869.	3.7	13
64	Adsorptive properties of sol-gel derived hybrid organic/inorganic coatings. <i>Materials Chemistry and Physics</i> , 2014, 147, 954-962.	4.0	13
65	Mechanism and Kinetics of Oligosilsesquioxane Growth in the In Situ Water Production Sol-Gel Route: Dependence on Water Availability. <i>European Journal of Inorganic Chemistry</i> , 2016, 2016, 2166-2174.	2.0	13
66	Towards low voltage resistive switch in sol-gel derived TiO ₂ /Ta ₂ O ₅ stack thin films. <i>Materials and Design</i> , 2016, 105, 359-365.	7.0	13
67	Filler-matrix interaction in sodium montmorillonite-organosilica nanocomposite coatings for corrosion protection. <i>Applied Clay Science</i> , 2017, 150, 81-88.	5.2	13
68	Hybrid Coatings Enriched with Tetraethoxysilane for Corrosion Mitigation of Hot-Dip Galvanized Steel in Chloride Contaminated Simulated Concrete Pore Solutions. <i>Materials</i> , 2017, 10, 306.	2.9	13
69	SiO ₂ /Ladder-Like Polysilsesquioxanes Nanocomposite Coatings: Playing with the Hybrid Interface for Tuning Thermal Properties and Wettability. <i>Coatings</i> , 2020, 10, 913.	2.6	13
70	Flash sintering of Mg-doped tricalcium phosphate (TCP) nanopowders. <i>Journal of the European Ceramic Society</i> , 2019, 39, 3883-3892.	5.7	12
71	Pyrolysis pathway of sol-gel derived organic/inorganic hybrid nanocomposites. <i>Journal of Non-Crystalline Solids</i> , 2003, 322, 22-28.	3.1	11
72	Sol-gel derived oriented multilayer ZnO thin films with memristive response. <i>Thin Solid Films</i> , 2016, 615, 427-436.	1.8	11

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73	Subfemtosecond dynamics of structural protons in silica xerogels. <i>Physical Review B</i> , 2008, 77, .	3.2	10
74	Study of the effect of organically functionalized silica nanoparticles on the properties of UV curable acrylic coatings. <i>Progress in Organic Coatings</i> , 2011, 72, 44-51.	3.9	10
75	Structure-related behavior of hybrid organic-inorganic materials prepared in different synthesis conditions from Zr-based NBBs and 3-methacryloxypropyl trimethoxysilane. <i>Journal of Applied Polymer Science</i> , 2012, 125, 1713-1723.	2.6	10
76	Hydrogenation performance of Pt-Ag catalysts highly dispersed on silica gel: occurrence of Pt-Ag alloy particles and role of their solid state structure in catalytic activity. <i>Journal of Molecular Catalysis</i> , 1989, 53, L13-L16.	1.2	9
77	Structural evolution of nanoporous silica thin films studied by positron annihilation spectroscopy and Fourier transform infrared spectroscopy. <i>Journal Physics D: Applied Physics</i> , 2007, 40, 5266-5274.	2.8	9
78	Growth of nanotubes in sol-gel-derived V_2O_5 powders and films prepared under acidic conditions. <i>Journal of Materials Research</i> , 2009, 24, 475-481.	2.6	9
79	Super-adsorbent polyacrylate under swelling in water for passive solar control of building envelope. <i>SN Applied Sciences</i> , 2020, 2, 1.	2.9	9
80	Effect of Hydrothermal Treatment and Doping on the Microstructural Features of Sol-Gel Derived BaTiO ₃ Nanoparticles. <i>Materials</i> , 2021, 14, 4345.	2.9	9
81	TiO ₂ containing hybrid nanocomposites with active-passive oxygen scavenging capability. <i>Chemical Engineering Journal</i> , 2021, 417, 129135.	12.7	9
82	Electron and Energy Transfer Mechanisms: The Double Nature of TiO ₂ Heterogeneous Photocatalysis. <i>Topics in Current Chemistry</i> , 2022, 380, 2.	5.8	9
83	Sol-Gel Derived Polysiloxane-Oxide Hybrid Materials: Extent of Phase Interaction. <i>Journal of Sol-Gel Science and Technology</i> , 2003, 26, 285-290.	2.4	8
84	Nanometric oxides from molecular precursors in the presence of starch: Coatings of glass with these oxides in silica sols. <i>Journal of Materials Research</i> , 2006, 21, 1726-1737.	2.6	8
85	Influence of Sol-Gel Conditions on the Growth of Thiol-Functionalized Silsesquioxanes Prepared by <i>In Situ</i> Water Production. <i>Journal of Nanoscience and Nanotechnology</i> , 2016, 16, 3030-3038.	0.9	8
86	Carbon monoxide insertion into trans-Pt(η -1-C ₃ H ₅)-(phosphine) ₂ Cl complexes in benzene. <i>Crystal</i>		

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91	Silica hairy nanoparticles: a promising material for self-assembling processes. <i>Soft Matter</i> , 2021, 17, 9434-9446.	2.7	7
92	Aging effect on the mechanical properties of hybrid gels. <i>Journal of Sol-Gel Science and Technology</i> , 1994, 2, 143-146.	2.4	6
93	Sol-Gel Synthesis of Heterometallic Oxopolymers. <i>ACS Symposium Series</i> , 1994, , 134-148.	0.5	6
94	Siloxane-Based Nanobuilding Blocks by Reaction Between Silanediol and Trifunctional Silicon Alkoxides. <i>Journal of Sol-Gel Science and Technology</i> , 2004, 32, 57-61.	2.4	6
95	Fabrication and characterization of optical planar waveguides activated by erbium ions for 1.5- μ m applications. , 2004, 5451, 574.		6
96	Thin Films of Plasma-Polymerized n-Hexane and ZnO Nanoparticles Co-Deposited via Atmospheric Pressure Plasma Jet. <i>Coatings</i> , 2021, 11, 167.	2.6	6
97	Electrostatic actuator for tactile display based on hydraulically coupled dielectric fluids and soft structures. , 2019, , .		6
98	Hydroxylated Cyclophosphazene/Silica Hybrid Materials: Synthesis and Characterization. <i>Journal of Inorganic and Organometallic Polymers</i> , 2002, 12, 59-78.	1.5	5
99	YSZ freestanding films from hybrid polymer-oxide composites by the sol-gel process: Influence of polymer features on ceramic microstructure. <i>Journal of the European Ceramic Society</i> , 2005, 25, 2647-2650.	5.7	5
100	Effect Of SnO ₂ on the Mechanical Properties of SiO ₂ /SnO ₂ Gel-Derived Composites. <i>Materials Research Society Symposia Proceedings</i> , 1990, 180, 351.	0.1	4
101	Structure-property behavior during aging of sol-gel-derived silica modified with Si-H and Si-CH ₃ groups. <i>Journal of Materials Research</i> , 1999, 14, 2100-2106.	2.6	4
102	Modification and Characterization of Si-Based Nanobuilding Blocks Precursors for Hybrid Materials. <i>Materials Research Society Symposia Proceedings</i> , 2004, 847, 180.	0.1	4
103	Characterization of Nano-structured UV Cured Acrylic Coatings. <i>ECS Transactions</i> , 2010, 24, 51-66.	0.5	4
104	Silicification of wood adopted for barrel production using pure silicon alkoxides in gas phase to avoid microbial colonisation. <i>Food Microbiology</i> , 2015, 45, 135-146.	4.2	4
105	Smart and Covalently Cross-Linked: Hybrid Shape Memory Materials Reinforced through Covalent Bonds by Zirconium Oxoclusters. <i>ChemPlusChem</i> , 2016, 81, 338-350.	2.8	4
106	Hydrophobic Coatings by Thiol-Ene Click Functionalization of Silsesquioxanes with Tunable Architecture. <i>Materials</i> , 2017, 10, 913.	2.9	4
107	Architecture of Silsesquioxanes. , 2018, , 3119-3151.		4
108	A novel and selective silk fibroin fragmentation method. <i>Soft Matter</i> , 2021, 17, 6863-6872.	2.7	4

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109	Surface Chemical Structure of $\text{SnO}_2\text{-TiO}_2$ Sol-Gel Powders. Materials Research Society Symposia Proceedings, 1994, 346, 421.	0.1	2
110	Hybrid organic-inorganic films by assembling of Si-Zr-based nanobuilding blocks. Journal of the European Ceramic Society, 2005, 25, 2051-2054.	5.7	2
111	Investigation of high-energy inelastic neutron scattering from liquid water confined in silica xerogel. Physica B: Condensed Matter, 2006, 385-386, 1095-1097.	2.7	2
112	Photopolymerization of hybrid organic/inorganic materials based on nanostructured units for photonic applications. , 2007, 6645, 397.		2
113	Optimisation and memristive response of sol-gel derived TiO_2 thin films. , 2015, , .		2
114	Structural characterization of sol-gel ZnO thin films on different substrates for memristive application. , 2015, , .		2
115	Functionalization of TiO_2 sol-gel derived films for cell confinement. Colloids and Surfaces B: Biointerfaces, 2021, 204, 111787.	5.0	2
116	Photoluminescence Spectroscopy of $\text{Er}^{3+}/\text{Yb}^{3+}$ Co-Activated Silica-Alumina Monolithic Xerogels. Journal of Sol-Gel Science and Technology, 2004, 32, 267-271.	2.4	1
117	Photonic devices based on patterning by two photon induced polymerization techniques. Proceedings of SPIE, 2008, , .	0.8	1
118	Alcoholic Fermentation with <i>Saccharomyces cerevisiae</i> Trapped in SiO_2 Films. , 1992, , 151-157.		1
119	Comparison of open volumes in silica based thin films produced by different precursors. Journal of Physics: Conference Series, 2011, 265, 012024.	0.4	0
120	Architecture of Silsesquioxanes. , 2016, , 1-34.		0
121	Merging the Sol-Gel Technique with the Pulsed Microplasma Cluster Source Deposition to Improve Control over the Memristive Response of TiO_2 Thin Films. Coatings, 2021, 11, 348.	2.6	0
122	Optical and radioluminescence properties of ZnO:Zn as a function of reduction degree and treatment temperature. Journal of Applied Physics, 2021, 130, 085104.	2.5	0
123	Synthesis and characterization of $\text{Nd}^{3+}/\text{Yb}^{3+}$ doped hydroxyapatite nanoparticles. Optical Materials: X, 2021, 12, 100118.	0.8	0
124	Nanopowders of metallic oxides prepared by the hydrolytic route with starch stabilization and biological abatement. Journal of Nanoscience and Nanotechnology, 2006, 6, 254-7.	0.9	0