Dietmar A Stephan

List of Publications by Year
in descending order

139	4,364	94381	133188
papers	citations	37 h-index	59 g-index

144	144	144	3385
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Photodegradation of rhodamine B in aqueous solution via SiO2@TiO2 nano-spheres. Journal of Photochemistry and Photobiology A: Chemistry, 2007, 185, 19-25.	2.0	280
2	Controlling cement hydration with nanoparticles. Cement and Concrete Composites, 2015, 57, 64-67.	4.6	211
3	Nucleation seeding with calcium silicate hydrate â€“ A review. Cement and Concrete Research, 2018, 113, 74-85.	4.6	193
4	Natural pozzolan based geopolymers: A review on mechanical, microstructural and durability characteristics. Construction and Building Materials, 2018, 190, 1251-1263.	3.2	133
5	Influence of Cr, Ni, and Zn on the properties of pure clinker phases. Cement and Concrete Research, 1999, 29, 545-552.	4.6	103
6	Overview of the use of micro-computed tomography (micro-CT) to investigate the relation between the material characteristics and properties of cement-based materials. Construction and Building Materials, 2019, 229, 116843.	3.2	103
7	The effect of synthesis conditions on the efficiency of C-S-H seeds to accelerate cement hydration. Cement and Concrete Composites, 2018, 87, 73-78.	4.6	102
8	Mechanical and microstructural properties of cement pastes containing carbon nanotubes and carbon nanotube-silica core-shell structures, exposed to elevated temperature. Cement and Concrete Composites, 2019, 95, 193-204.	4.6	88
9	Evaluation of the Effects of Crushed and Expanded Waste Glass Aggregates on the Material Properties of Lightweight Concrete Using Image-Based Approaches. Materials, 2017, 10, 1354.	1.3	85
10	The production and properties of cold-bonded aggregate and its applications in concrete: A review. Construction and Building Materials, 2019, 225, 29-43.	3.2	84
11	Comparison of lightweight aggregate and foamed concrete with the same density level using image-based characterizations. Construction and Building Materials, 2019, 211, 988-999.	3.2	79
12	The prediction of bitumen properties based on FTIR and multivariate analysis methods. Fuel, 2017, 208, 655-661.	3.4	78
13	On-line tracking of the coating of nanoscaled silica with titania nanoparticles via zeta-potential measurements. Journal of Colloid and Interface Science, 2006, 293, 88-92.	5.0	77
14	The Influence of Nanomaterials on the Thermal Resistance of Cement-Based Compositesâ€”A Review. Nanomaterials, 2018, 8, 465.	1.9	75
15	Acceleration of cement hydration â€“ A review of the working mechanisms, effects on setting time, and compressive strength development of accelerating admixtures. Construction and Building Materials, 2022, 323, 126554.	3.2	75
16	Influence of Cr, Ni, and Zn on the properties of pure clinker phases. Cement and Concrete Research, 1999, 29, 651-657.	4.6	68
17	Pore Characteristics and Their Effects on the Material Properties of Foamed Concrete Evaluated Using Micro-CT Images and Numerical Approaches. Applied Sciences (Switzerland), 2017, 7, 550.	1.3	67
18	High intakes of Cr, Ni, and Zn in clinker. Cement and Concrete Research, 1999, 29, 1949-1957.	4.6	66

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19	Effect of slag chemistry on the hydration of alkali-activated blast-furnace slag. Materials and Structures/Materiaux Et Constructions, 2015, 48, 629-641.	1.3	65
20	Evaluating the effects of nanosilica on the material properties of lightweight and ultra-lightweight concrete using image-based approaches. Construction and Building Materials, 2020, 264, 120241.	3.2	59
21	Relating Ettringite Formation and Rheological Changes during the Initial Cement Hydration: A Comparative Study Applying XRD Analysis, Rheological Measurements and Modeling. Materials, 2019, 12, 2957.	1.3	56
22	Synthesis of Pure Cementitious Phases by Sol-Gel Process as Precursor. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2004, 630, 1477-1483.	0.6	51
23	Influence of Nanosilica on Mechanical Properties, Sorptivity, and Microstructure of Lightweight Concrete. Materials, 2019, 12, 3078.	1.3	51
24	High intakes of Cr, Ni, and Zn in clinker. Cement and Concrete Research, 1999, 29, 1959-1967.	4.6	50
25	Crystal structure refinement and hydration behaviour of doped tricalcium aluminate. Cement and Concrete Research, 2006, 36, 2011-2020.	4.6	48
26	Properties of lightweight concrete made with core-shell structured lightweight aggregate. Construction and Building Materials, 2019, 205, 39-51.	3.2	48
27	Performance assessment of core-shell structured lightweight aggregate produced by cold bonding pelletization process. Construction and Building Materials, 2018, 179, 220-231.	3.2	47
28	Effect of silica modulus on the geopolymerization activity of natural pozzolans. Construction and Building Materials, 2019, 219, 31-43.	3.2	47
29	Issues on characterization of cement paste microstructures from <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si3.gif" overflow="scroll"><mml:mrow><mml:mi>Î¼</mml:mi></mml:mrow></mml:math>-CT and virtual experiment framework for evaluating mechanical properties. Construction and Building Materials, 2019, 202, 82-102.	3.2	47
30	The influence of the chemical and physical properties of C-S-H seeds on their potential to accelerate cement hydration. Construction and Building Materials, 2019, 228, 116723.	3.2	46
31	The effects of seawater on the hydration, microstructure and strength development of Portland cement pastes incorporating colloidal silica. Applied Nanoscience (Switzerland), 2020, 10, 2627-2638.	1.6	46
32	Effect of different expanded aggregates on the properties of lightweight concrete. Magazine of Concrete Research, 2019, 71, 95-107.	0.9	44
33	Interlaboratory study on rheological properties of cement pastes and reference substances: comparability of measurements performed with different rheometers and measurement geometries. Materials and Structures/Materiaux Et Constructions, 2020, 53, 1.	1.3	43
34	Crystal structure refinement and hydration behaviour of 3CaOÂ·SiO2 solid solutions with MgO, Al2O3 and Fe2O3. Journal of the European Ceramic Society, 2006, 26, 141-148.	2.8	42
35	Reaction of calcium carbonate minerals in sodium silicate solution and its role in alkali-activated systems. Minerals Engineering, 2021, 165, 106849.	1.8	42
36	Investigation of phase composition and microstructure of foamed cement paste with different supplementary cementing materials. Cement and Concrete Composites, 2020, 109, 103560.	4.6	41

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37	Relationships between the chemistry and the physical properties of bitumen. Road Materials and Pavement Design, 2018, 19, 1636-1650.	2.0	39
38	The effects of nano- and micro-sized additives on 3D printable cementitious and alkali-activated composites: a review. Applied Nanoscience (Switzerland), 2022, 12, 805-823.	1.6	39
39	Hydration characteristics and hydration products of tricalcium silicate doped with a combination of MgO, Al2O3 and Fe2O3. Thermochimica Acta, 2008, 472, 64-73.	1.2	37
40	Setting of cement with controlled superplasticizer addition monitored by ultrasonic measurements and calorimetry. Cement and Concrete Composites, 2016, 66, 24-37.	4.6	37
41	Correlation between microstructural characteristics from micro-CT of foamed concrete and mechanical behaviors evaluated by experiments and simulations. Cement and Concrete Composites, 2020, 112, 103657.	4.6	37
42	Effect of the inherent alkalis of alkali activated slag on the risk of alkali silica reaction. Cement and Concrete Research, 2017, 98, 82-90.	4.6	35
43	The effects of nanosilica on the fresh and hardened properties of 3D printable mortars. Construction and Building Materials, 2021, 281, 122574.	3.2	35
44	Investigation of characteristics and responses of insulating cement paste specimens with Aer solids using X-ray micro-computed tomography. Construction and Building Materials, 2016, 118, 204-215.	3.2	34
45	The influence of different concrete additions on the properties of lightweight concrete evaluated using experimental and numerical approaches. Construction and Building Materials, 2018, 189, 314-322.	3.2	33
46	Preparation and Characterization of Ultra-Lightweight Foamed Concrete Incorporating Lightweight Aggregates. Applied Sciences (Switzerland), 2019, 9, 1447.	1.3	33
47	Comparison of the pore size distributions of concretes with different air-entraining admixture dosages using 2D and 3D imaging approaches. Materials Characterization, 2020, 162, 110182.	1.9	33
48	Natural Fiber-Stabilized Geopolymer Foamsâ€"A Review. Materials, 2020, 13, 3198.	1.3	31
49	RILEM TC 247-DTA round robin test: sulfate resistance, alkali-silica reaction and freezeâ€“thaw resistance of alkali-activated concretes. Materials and Structures/Materiaux Et Constructions, 2020, 53, 1.	1.3	30
50	Incorporation of magnetite powder as a cement additive for improving thermal resistance and gamma-ray shielding properties of cement-based composites. Construction and Building Materials, 2019, 204, 113-121.	3.2	29
51	Multivariate NARX neural network in prediction gaseous emissions within the influent chamber of wastewater treatment plants. Atmospheric Pollution Research, 2019, 10, 1812-1822.	1.8	28
52	Evaluation of the effects of bismuth oxide (Bi2O3) micro and nanoparticles on the mechanical, microstructural and Î³-ray/neutron shielding properties of Portland cement pastes. Construction and Building Materials, 2021, 284, 122758.	3.2	27
53	Effects of anisotropic voids on thermal properties of insulating media investigated using 3D printed samples. Construction and Building Materials, 2016, 111, 529-542.	3.2	26
54	Alkali activated slag binder: effect of cations from silicate activators. Materials and Structures/Materiaux Et Constructions, 2017, 50, 1.	1.3	25

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55	The effects of seawater and nanosilica on the performance of blended cements and composites. Applied Nanoscience (Switzerland), 2020, 10, 5009-5026.	1.6	25
56	3D printable lightweight cementitious composites with incorporated waste glass aggregates and expanded microspheres â€“ Rheological, thermal and mechanical properties. Journal of Building Engineering, 2021, 44, 102718.	1.6	25
57	Effects of expanded polystyrene (EPS) sizes and arrangements on the properties of lightweight concrete. Materials and Structures/Materiaux Et Constructions, 2018, 51, 1.	1.3	24
58	Bitumen Characterization with Fourier Transform Infrared Spectroscopy and Multivariate Evaluation: Prediction of Various Physical and Chemical Parameters. Energy & Fuels, 2018, 32, 10437-10442.	2.5	24
59	Photocatalytic Activity and Mechanical Properties of Cements Modified with TiO2/N. Materials, 2019, 12, 3756.	1.3	24
60	Setting and hardening behavior of volcanic ash phosphate cement. Journal of Building Engineering, 2020, 31, 101427.	1.6	24
61	Adsorption kinetics of retarding admixtures on cement with time controlled addition. Cement and Concrete Research, 2017, 102, 119-126.	4.6	23
62	Investigation of the Incompatibilities of Cement and Superplasticizers and Their Influence on the Rheological Behavior. Materials, 2020, 13, 977.	1.3	23
63	Penetration test as a fast method to determine yield stress and structural build-up for 3D printing of cementitious materials. Cement and Concrete Composites, 2021, 121, 104066.	4.6	23
64	Influence of mechanical activation of fly ash in presence of polynaphthalene sulfonate superplasticizer on rheology and hydration kinetics of cement â€“ fly ash pastes. Construction and Building Materials, 2019, 210, 380-390.	3.2	21
65	Characterization data of reference cement CEM I 42.5 R used for priority program DFG SPP 2005 â€œOpus Fluidum Futurum â€“ Rheology of reactive, multiscale, multiphase construction materialsâ€: Data in Brief, 2019, 27, 104699.	0.5	21
66	The preparation of silicaâ€“titania coreâ€“shell particles and their impact as an alternative material to pure nano-titania photocatalysts. Catalysis Today, 2011, 161, 53-58.	2.2	20
67	Modeling of multiple phase solid microstructures and prediction of mechanical behaviors of foamed concrete. Construction and Building Materials, 2020, 248, 118637.	3.2	20
68	Principles and test methods for the determination of the activity of photocatalytic materials and their application to modified building materials. Photochemical and Photobiological Sciences, 2011, 10, 338-342.	1.6	19
69	Hydration kinetics of Portland cement in the presence of vinyl acetate ethylene latex stabilized with polyvinyl alcohol. Journal of Materials Science, 2018, 53, 7417-7430.	1.7	19
70	SiO2/TiO2 composite powders deposited on cement-based materials: Rhodamine B removal and the bonding mechanism. Construction and Building Materials, 2020, 241, 118124.	3.2	19
71	Influence of combined doping of tricalcium silicate with MgO, Al2O3 and Fe2O3: synthesis, grindability, X-ray diffraction and 29Si NMR. Materials and Structures/Materiaux Et Constructions, 2008, 41, 1729-1740.	1.3	18
72	Control of the setting reaction and strength development of slag-blended volcanic ash-based phosphate geopolymer with the addition of boric acid. Journal of the Australian Ceramic Society, 2021, 57, 1145-1154.	1.1	18

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73	Calcium silicate hydrateâ€"inâ€situdevelopment of the silicate structure followed by infrared spectroscopy. Journal of the American Ceramic Society, 2021, 104, 6611-6624.	1.9	18
74	Investigation of the effects of anisotropic pores on material properties of insulating concrete using computed tomography and probabilistic methods. Energy and Buildings, 2016, 125, 122-129.	3.1	17
75	Phase and dimensional stability of volcanic ash-based phosphate inorganic polymers at elevated temperatures. SN Applied Sciences, 2020, 2, 1.	1.5	17
76	Quartzâ€"titania composites for the photocatalytical modification of construction materials. Cement and Concrete Composites, 2013, 36, 109-115.	4.6	16
77	Effect of Different Gradings of Lightweight Aggregates on the Properties of Concrete. Applied Sciences (Switzerland), 2017, 7, 585.	1.3	16
78	The unusual solidification process of alkali activated slag and its relationship with the glass structure of the slag. Cement and Concrete Research, 2019, 121, 1-10.	4.6	16
79	Preparation of calcium silicate hydrate seeds by means of mechanochemical method and its effect on the early hydration of cement. Advances in Mechanical Engineering, 2019, 11, 168781401984058.	0.8	16
80	The performance of ultra-lightweight foamed concrete incorporating nanosilica. Archives of Civil and Mechanical Engineering, 2021, 21, 1.	1.9	16
81	Investigation of the Early Cement Hydration with a New Penetration Test, Rheometry and In-Situ XRD. RILEM Bookseries, 2020, , 246-255.	0.2	16
82	Hydration and hydration products of two-phase Portland cement clinker doped with Na2O. Advances in Cement Research, 2007, 19, 125-131.	0.7	15
83	Impact of triethanolamine on the sulfate balance of Portland cements with mixed sulfate carriers. Journal of the American Ceramic Society, 2021, 104, 4829-4842.	1.9	15
84	Boosting Portland cement-free composite performance via alkali-activation and reinforcement with pre-treated functionalised wheat straw. Industrial Crops and Products, 2022, 178, 114648.	2.5	15
85	Investigating the release of ZnO nanoparticles from cement mortars on microbiological models. Applied Nanoscience (Switzerland), 2022, 12, 489-502.	1.6	14
86	Influence of water to cement ratio on the compatibility of polycarboxylate superplasticizer with Portland cement. Construction and Building Materials, 2022, 341, 127846.	3.2	14
87	Factors influencing thermal conductivity and compressive strength of natural fiber-reinforced geopolymer foams. Open Ceramics, 2021, 5, 100065.	1.0	13
88	Early performances of cement paste in the presence of triethanolamine: Rheology, setting and microstructural development. Journal of Applied Polymer Science, 2021, 138, 50753.	1.3	12
89	The effects of calcium formate on the early hydration of alkali silicate activated slag. Materials and Structures/Materiaux Et Constructions, 2019, 52, 1.	1.3	11
90	Analyzing the early structural build-up of accelerated cement pastes. Materials and Structures/Materiaux Et Constructions, 2021, 54, 1.	1.3	11

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91	Impact of retarders by controlled addition on the setting, early hydration and microstructural development of different cements. Magazine of Concrete Research, 2016, 68, 1011-1024.	0.9	10
92	Effects of cations on the yield stress of a highly concentrated suspension of glass beads with the addition of polycarboxylate superplasticizer. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2019, 575, 176-183.	2.3	10
93	The Effect of Lightweight Concrete Cores on the Thermal Performance of Vacuum Insulation Panels. Materials, 2020, 13, 2632.	1.3	10
94	Measuring interparticle forces: Evaluation of superplasticizers for microsilica via colloidal probe technique. Cement and Concrete Composites, 2013, 36, 42-47.	4.6	9
95	Leaching of PCE-based Superplasticiser from Microfine Cement: a Chemical and Ecotoxicological Point of View. Water, Air, and Soil Pollution, 2017, 228, 1.	1.1	9
96	Impact of the mineralogical composition of natural pozzolan on properties of resultant geopolymers. Journal of Sustainable Cement-Based Materials, 2021, 10, 149-164.	1.7	9
97	Understanding the binder chemistry, microstructure, and physical properties of volcanic ash phosphate geopolymer binder. Journal of the American Ceramic Society, 2022, 105, 3226-3237.	1.9	9
98	Mechanical behavior comparison of single and multiple phase models for cement paste using micro-CT images and nanoindentation. Construction and Building Materials, 2022, 342, 127938.	3.2	9
99	Solâ€“gel Mediated Coating and Characterization of Photocatalytic Sand and Fumed Silica for Environmental Remediation. Water, Air, and Soil Pollution, 2014, 225, 1.	1.1	8
100	Fast Method for Testing the Photocatalytic Performance of Modified Gypsum. Catalysts, 2019, 9, 693.	1.6	8
101	The effects of calciumâ€“silicateâ€“hydrate (Câ€“Sâ€“H) seeds on reference microorganisms. Applied Nanoscience (Switzerland), 2020, 10, 4855-4867.	1.6	8
102	Characterization of foamed concrete with different additives using multi-scale micro-computed tomography. Construction and Building Materials, 2022, 319, 125953.	3.2	8
103	The effect of d-gluconic acid as a retarder of ground granulated blast-furnace slag pastes. Construction and Building Materials, 2016, 123, 99-105.	3.2	7
104	Provenancing of cement using elemental analyses and isotope techniques â€“ the state-of-the-art and future perspectives. Journal of Analytical Atomic Spectrometry, 2021, 36, 2030-2042.	1.6	7
105	Sequential learning to accelerate discovery of alkali-activated binders. Journal of Materials Science, 2021, 56, 15859-15881.	1.7	7
106	Effect of leached cement paste samples with different superplasticiser content on germination and initial root growth of white mustard (Sinapis alba) and cress (Lepidium sativum). Water, Air, and Soil Pollution, 2017, 228, 1.	1.1	6
107	Versatile triggered substance release systems via a highly flexible high throughput encapsulation technique. Applied Materials Today, 2018, 11, 231-237.	2.3	6
108	Challenges in Studying the Incorporation of Nanomaterials to Building Materials on Microbiological Models. Springer Proceedings in Physics, 2019, , 285-303.	0.1	6

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109	Using computational fluid dynamics to describe H2S mass transfer across the waterâ€“air interface in sewers. Water Science and Technology, 2019, 79, 1934-1946.	1.2	6
110	A Systematic Study on Polymer-Modified Alkali-Activated Slagâ€“Part II: From Hydration to Mechanical Properties. Materials, 2020, 13, 3418.	1.3	6
111	Identification and quantification of additives in bituminous binders based on FTIR spectroscopy and multivariate analysis methods. Materials and Structures/Materiaux Et Constructions, 2021, 54, 1.	1.3	6
112	Pore and Solid Characterizations of Interfacial Transition Zone of Mortar Using Microcomputed Tomography Images. Journal of Materials in Civil Engineering, 2021, 33, .	1.3	6
113	Insight into the microstructural and durability characteristics of 3D printed concrete: Cast versus printed specimens. Case Studies in Construction Materials, 2022, 17, e01320.	0.8	6
114	Reactivation of a Retarded Suspension of Ground Granulated Blast-Furnace Slag. Materials, 2016, 9, 174.	1.3	5
115	Release Behaviour of Major Elements and Superplasticiser from Cement Suspensions. Water, Air, and Soil Pollution, 2016, 227, 1.	1.1	5
116	The Effects of Anisotropic Insulations with Different Spatial Distributions on Material Properties of Mortar Specimens. International Journal of Concrete Structures and Materials, 2017, 11, 573-584.	1.4	5
117	Site resolved optical detection of photocatalysis on building materials. Journal of Photochemistry and Photobiology A: Chemistry, 2018, 366, 97-102.	2.0	5
118	Xonotlite and Hillebrandite as Model Compounds for Calcium Silicate Hydrate Seeding in Cementitious Materials. Transportation Research Record, 2021, 2675, 65-72.	1.0	5
119	Bitumen reuse: physical and chemical approach to investigate the effectiveness of rejuvenators. Road Materials and Pavement Design, 2023, 24, 1130-1157.	2.0	5
120	Colloidal interaction between vinylacetate ethylene latex stabilized by polyvinyl alcohol and portland cement. SN Applied Sciences, 2019, 1, 1.	1.5	4
121	Biofilms in the gravity sewer interfaces: making a friend from a foe. Reviews in Environmental Science and Biotechnology, 2021, 20, 795-813.	3.9	4
122	Synthesis and characterisation of alites from reduced basic oxygen furnace slags. Cement and Concrete Research, 2021, 147, 106518.	4.6	4
123	Architectural Applications and Workflows for Additive Fabrication with Concrete. RILEM Bookseries, 2020, , 946-955.	0.2	4
124	Performance Enhancement of Polycondensate-Based Superplasticizers by Encapsulation. Chemical Engineering and Technology, 2017, 40, 608-615.	0.9	3
125	Leaching of Polyurethane Systems for Waterproofing Purposes Whilest Curing. Water, Air, and Soil Pollution, 2017, 228, 1.	1.1	3
126	A systematic study on polymer modified alkali-activated slag â€“ Part I: Stability analysis of colloidal polymer dispersion in sodium water glass. Construction and Building Materials, 2019, 221, 40-49.	3.2	3

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127	Controlled Release of Construction Chemicals by Encapsulation. Journal of Encapsulation and Adsorption Sciences, 2016, 06, 9-21.	0.3	3
128	Studying the Hydration of a Retarded Suspension of Ground Granulated Blast-Furnace Slag after Reactivation. Materials, 2016, 9, 933.	1.3	2
129	Matrixâ€Based Encapsulation of Construction Chemicals Using Highâ€Shear Agglomeration. Chemical Engineering and Technology, 2016, 39, 1111-1120.	0.9	2
130	Investigation of the Leaching Behaviour of a Novel Cement-Polyurethane Hybrid Material for Waterproofing Purpose. Water, Air, and Soil Pollution, 2017, 228, 1.	1.1	2
131	Effects of Titanium Dioxide on the Structure and Properties of Bitumen. Journal of Materials in Civil Engineering, 2020, 32, .	1.3	2
132	Testing of Eluates from Waterproof Building Materials for Potential Environmental Effects Due to the Behavior of Enchytraeus albidus. Materials, 2021, 14, 294.	1.3	2
133	Early Properties of Portland Cements with Varied Set Regulators. RILEM Bookseries, 2020, , 97-105.	0.2	2
134	Influence of Different Accelerators on the Rheology and Early Hydration of Cement Paste. RILEM Bookseries, 2020, , 106-115.	0.2	2
135	Development of a sample preparation procedure for Sr isotope analysis of Portland cements. Analytical and Bioanalytical Chemistry, 2022, , 1.	1.9	2
136	On-site reduction of nitrogen oxides at an emission hotspot using actively vented photocatalytic reactors in a highway tunnel. SN Applied Sciences, 2022, 4, 1.	1.5	2
137	Interaction of Different Charged Polymers with Potassium Ions and Their Effect on the Yield Stress of Highly Concentrated Glass Bead Suspensions. Materials, 2020, 13, 1490.	1.3	1
138	Multiphase CFD-Simulation of Transport Phenomena in Sewer Systems. Green Energy and Technology, 2019, , 848-853.	0.4	1
139	Sa1314 Inadequate Symptom Control on Long-Term PPI Therapy in GERD - Fact or Fiction?. Gastroenterology, 2016, 150, S279.	0.6	0