Wolfgang Peukert

List of Publications by Citations

418 papers	11,469 citations	54 h-index	82 g-index
430 ext. papers	12,874 ext. citations	5.6 avg, IF	6.61 L-index

#	Paper	IF	Citations
418	Carbon nanodots: toward a comprehensive understanding of their photoluminescence. *Journal of the American Chemical Society*, **2014**, 136, 17308-16	16.4	282
417	Impact of the nanoparticle-protein corona on colloidal stability and protein structure. *Langmuir*, **2012**, 28, 9673-9	4	257
416	Breakage behaviour of different materials□onstruction of a mastercurve for the breakage probability. *Powder Technology*, **2003**, 129, 101-110	5.2	215
415	Analysis of optical absorbance spectra for the determination of ZnO nanoparticle size distribution, solubility, and surface energy. *ACS Nano*, **2009**, 3, 1703-10	16.7	213
414	Scalable production of graphene sheets by mechanical delamination. *Carbon*, **2010**, 48, 3196-3204	10.4	180
413	Mechanical production and stabilization of submicron particles in stirred media mills. *Powder Technology*, **2003**, 132, 64-73	5.2	147
412	Efficient drug-delivery using magnetic nanoparticles--biodistribution and therapeutic effects in tumour bearing rabbits. *Nanomedicine: Nanotechnology, Biology, and Medicine*, **2013**, 9, 961-71	6	144
411	Combined experimental/numerical study on the precipitation of nanoparticles. *AICHE Journal*, **2004** , 50, 3234-3247	3.6	144
410	Particle adhesion force distributions on rough surfaces. *Langmuir*, **2004**, 20, 5298-303	4	142
409	Nanomilling in stirred media mills. *Chemical Engineering Science*, **2005**, 60, 4557-4565	4.4	134
408	London-van der Waals adhesiveness of rough particles. *Powder Technology*, **2006**, 161, 248-255	5.2	122
407	Identifying the apparent and true grinding limit. *Powder Technology*, **2009**, 195, 25-30	5.2	110
406	Precipitation of nanoparticles in a T-mixer: Coupling the particle population dynamics with hydrodynamics through direct numerical simulation. *Chemical Engineering and Processing: Process Intensification*, **2006**, 45, 908-916	3.7	110
405	pH effects on the molecular structure of □actoglobulin modified air-water interfaces and its impact on foam rheology. *Langmuir*, **2013**, 29, 11646-55	4	106
404	Determination of the quantum dot band gap dependence on particle size from optical absorbance and transmission electron microscopy measurements. *ACS Nano*, **2012**, 6, 9021-32	16.7	105
403	From single particle impact behaviour to modelling of impact mills. *Chemical Engineering Science*, **2005**, 60, 5164-5176	4.4	103
402	Multidimensional analysis of nanoparticles with highly disperse properties using multiwavelength analytical ultracentrifugation. *ACS Nano*, **2014**, 8, 8871-86	16.7	102

401	Experimental Investigation into the Influence of Mixing on Nanoparticle Precipitation. *Chemical Engineering and Technology*, **2002**, 25, 657	2	99
400	Nanoparticle Production with Stirred-Media Mills: Opportunities and Limits. *Chemical Engineering and Technology*, **2010**, 33, 1401-1411	2	96
399	Agglomeration and breakage of nanoparticles in stirred media mills comparison of different methods and models. *Chemical Engineering Science*, **2006**, 61, 135-148	4.4	96
398	In vitro reactivity of Cu doped 45S5 Bioglass derived scaffolds for bone tissue engineering. *Journal of Materials Chemistry B*, **2013**, 1, 5659-5674	7.3	95
397	Influence of mechanical properties on impact fracture: Prediction of the milling behaviour of pharmaceutical powders by nanoindentation. *Powder Technology*, **2009**, 188, 301-313	5.2	93
396	Dispersive forces of particle urface interactions: direct AFM measurements and modelling. *Powder Technology*, **2003**, 130, 102-109	5.2	93
395	Minkowski tensor shape analysis of cellular, granular and porous structures. *Advanced Materials*, **2011**, 23, 2535-53	24	91
394	Predictive simulation of nanoparticle precipitation based on the population balance equation. *Chemical Engineering Science*, **2006**, 61, 167-181	4.4	91
393	Attractive particle interaction forces and packing density of fine glass powders. *Scientific Reports*, **2014**, 4, 6227	4.9	84
392	Accelerated grain refinement during accumulative roll bonding by nanoparticle reinforcement. *Scripta Materialia*, **2011**, 64, 245-248	5.6	84
391	Industrial separation of fine particles with difficult dust properties. *Powder Technology*, **2001**, 118, 136-148	5.2	84
390	Control of aggregation in production and handling of nanoparticles. *Chemical Engineering and Processing: Process Intensification*, **2005**, 44, 245-252	3.7	83
389	Experimental and theoretical studies of the colloidal stability of nanoparticles-a general interpretation based on stability maps. *ACS Nano*, **2011**, 5, 4658-69	16.7	82
388	Shedding light on the effective fluorophore structure of high fluorescence quantum yield carbon nanodots. *RSC Advances*, **2017**, 7, 24771-24780	3.7	76
387	Cobalt-releasing 1393 bioactive glass-derived scaffolds for bone tissue engineering applications. *ACS Applied Materials & Interfaces*, **2014**, 6, 2865-77	9.5	76
386	Inorganic Layers on Polymeric Films nfluence of Defects and Morphology on Barrier Properties. *Chemical Engineering and Technology*, **2003**, 26, 605-614	2	76
385	The influence of suspension properties on the grinding behavior of alumina particles in the submicron size range in stirred media mills. *Powder Technology*, **2005**, 156, 103-110	5.2	74
384	Dispersing nanoparticles in liquids. *International Journal of Mineral Processing*, **2004**, 74, S31-S41		73

383	The influence of particle charge and roughness on particle–substrate adhesion. *Powder Technology*, **2003**, 135-136, 82-91	5.2	67
382	TAILORING PARTICLE SIZE THROUGH NANOPARTICLE PRECIPITATION. *Chemical Engineering Communications*, **2004**, 191, 580-606	2.2	66
381	On the relevance of accounting for the evolution of the fractal dimension in aerosol process simulations. *Journal of Aerosol Science*, **2003**, 34, 511-534	4.3	66
380	Ligand-assisted thickness tailoring of highly luminescent colloidal CHNHPbX (X = Br and I) perovskite nanoplatelets. *Chemical Communications*, **2016**, 53, 244-247	5.8	65
379	Photobleaching and stabilization of carbon nanodots produced by solvothermal synthesis. *Physical Chemistry Chemical Physics*, **2016**, 18, 466-75	3.6	64
378	Quantitative evaluation of delamination of graphite by wet media milling. *Carbon*, **2015**, 81, 284-294	10.4	63
377	A novel process route for the production of spherical LBM polymer powders with small size and good flowability. *Powder Technology*, **2014**, 261, 78-86	5.2	63
376	Determination of material properties relevant to grinding by practicable labscale milling tests. *International Journal of Mineral Processing*, **2004**, 74, S329-S338		63
375	Structure and Dynamics of Interfacial Peptides and Proteins from Vibrational Sum-Frequency Generation Spectroscopy. *Chemical Reviews*, **2020**, 120, 3420-3465	68.1	61
374	Prediction of aggregation kinetics based on surface properties of nanoparticles. *Chemical Engineering Science*, **2005**, 60, 11-25	4.4	61
373	Efficient synthetic access to cationic dendrons and their application for ZnO nanoparticles surface functionalization: new building blocks for dye-sensitized solar cells. *Journal of the American Chemical Society*, **2010**, 132, 17910-20	16.4	60
372	Protein adsorption at the electrified air-water interface: implications on foam stability. *Langmuir*, **2012**, 28, 7780-7	4	59
371	Impact of oxygen plasma treatment on the device performance of zinc oxide nanoparticle-based thin-film transistors. *ACS Applied Materials & Interfaces*, **2012**, 4, 1693-6	9.5	57
370	A General Approach To Study the Thermodynamics of Ligand Adsorption to Colloidal Surfaces Demonstrated by Means of Catechols Binding to Zinc Oxide Quantum Dots. *Chemistry of Materials*, **2015**, 27, 358-369	9.6	56
369	Probing colloidal interfaces by angle-resolved second harmonic light scattering. *Physical Review B*, **2010**, 82,	3.3	56
368	Communication via Electron and Energy Transfer between Zinc Oxide Nanoparticles and Organic Adsorbates. *Journal of Physical Chemistry C*, **2009**, 113, 4669-4678	3.8	56
367	Effective Ligand Engineering of the Cu2ZnSnS4 Nanocrystal Surface for Increasing Hole Transport Efficiency in Perovskite Solar Cells. *Advanced Functional Materials*, **2016**, 26, 8300-8306	15.6	56
366	Real-Time Monitoring of the Nucleation and Growth of ZnO Nanoparticles Using an Optical Hyper-Rayleigh Scattering Method. *Journal of Physical Chemistry C*, **2009**, 113, 11995-12001	3.8	55

365	An improved generalized AMBER force field (GAFF) for urea. *Journal of Molecular Modeling*, **2010**, 16, 1427-40	2	54
364	Simulation of the hydrodynamic drag of aggregated particles. *Journal of Colloid and Interface Science*, **2006**, 301, 155-67	9.3	54
363	Industrially scalable and cost-effective Mn2+ doped ZnxCd1⊠S/ZnS nanocrystals with 70% photoluminescence quantum yield, as efficient down-shifting materials in photovoltaics. *Energy and Environmental Science*, **2016**, 9, 1083-1094	35.4	53
362	Production of polymer particles below 5 □m by wet grinding. *Powder Technology*, **2012**, 228, 84-90	5.2	53
361	One-pot colloidal synthesis of plasmonic patchy particles. *Advanced Materials*, **2011**, 23, 2644-9	24	53
360	Microstructural characterization of hematite during wet and dry millings using Rietveld and XRD line profile analyses. *Powder Technology*, **2008**, 186, 9-21	5.2	53
359	Industrial classification in a new impeller wheel classifier. *Powder Technology*, **1999**, 105, 186-189	5.2	53
358	Delamination of graphite in a high pressure homogenizer. *RSC Advances*, **2015**, 5, 57328-57338	3.7	52
357	Purification and structural elucidation of carbon dots by column chromatography. *Nanoscale*, **2019**, 11, 8464-8474	7.7	51
356	Noble-Metal-Free Photocatalytic Hydrogen Evolution Activity: The Impact of Ball Milling Anatase Nanopowders with TiH. *Advanced Materials*, **2017**, 29, 1604747	24	51
355	An effective way to stabilize colloidal particles dispersed in polar and nonpolar media. *Langmuir*, **2007**, 23, 504-8	4	51
354	Evolution of the fractal dimension for simultaneous coagulation and sintering. *Chemical Engineering Science*, **2006**, 61, 293-305	4.4	51
353	Simultaneous analysis of hydrodynamic and optical properties using analytical ultracentrifugation equipped with multiwavelength detection. *Analytical Chemistry*, **2015**, 87, 3396-403	7.8	49
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351	Monte Carlo simulation of aggregate morphology for simultaneous coagulation and sintering. *Journal of Nanoparticle Research*, **2004**, 6, 613-626	2.3	49
350	Optimum between purification and colloidal stability of ZnO nanoparticles. *Advanced Powder Technology*, **2010**, 21, 41-49	4.6	48
349	New possibilities of accurate particle characterisation by applying direct boundary models to analytical centrifugation. *Nanoscale*, **2015**, 7, 6574-87	7.7	47
348	Determination of the lateral dimension of graphene oxide nanosheets using analytical ultracentrifugation. *Small*, **2015**, 11, 814-25	11	47

347	Optimized polybutylene terephthalate powders for selective laser beam melting. *Chemical Engineering Science*, **2016**, 156, 1-10	4.4	47
346	Determination of Hansen parameters for particles: A standardized routine based on analytical centrifugation. *Advanced Powder Technology*, **2018**, 29, 1550-1561	4.6	46
345	Mechanochemical aspects in wet stirred media milling. *International Journal of Mineral Processing*, **2016**, 156, 24-31		46
344	Impact Fragmentation of Metal Nanoparticle Agglomerates. *Particle and Particle Systems Characterization*, **2007**, 24, 193-200	3.1	46
343	A review of models for single particle compression and their application to silica microspheres. *Advanced Powder Technology*, **2014**, 25, 136-153	4.6	45
342	Detailed Analysis of the Growth Kinetics of ZnO Nanorods in Methanol. *Journal of Physical Chemistry C*, **2010**, 114, 6243-6249	3.8	45
341	Use of COSMO-RS for the prediction of adsorption equilibria. *AICHE Journal*, **2002**, 48, 1093-1099	3.6	45
340	Vibrational sum-frequency generation at protein modified air□water interfaces: Effects of molecular structure and surface charging. *Current Opinion in Colloid and Interface Science*, **2014**, 19, 207-215	7.6	44
339	Influence of annealing temperature and measurement ambient on TFTs based on gas phase synthesized ZnO nanoparticles. *Microelectronic Engineering*, **2010**, 87, 2312-2316	2.5	43
338	Assigning Electronic States in Carbon Nanodots. *Advanced Functional Materials*, **2016**, 26, 7975-7985	15.6	42
337	The morphology of integrated self-assembled monolayers and their impact on devices □A computational and experimental approach. *Organic Electronics*, **2010**, 11, 1476-1482	3.5	42
336	Detailed investigations of ZnO photoelectrodes preparation for dye sensitized solar cells. *Langmuir* , **2011**, 27, 3920-9	4	41
335	Kinetics of radical formation during the mechanical activation of quartz. *Langmuir*, **2009**, 25, 2264-70	4	41
334	Mechanism of silver ion reduction in concentrated solutions of amphiphilic invertible polyesters in nonpolar solvent at room temperature. *Langmuir*, **2008**, 24, 12587-94	4	41
333	Material properties in fine grinding. *International Journal of Mineral Processing*, **2004**, 74, S3-S17		41
332	Morphological impact of zinc oxide layers on the device performance in thin-film transistors. *Nanoscale*, **2011**, 3, 897-9	7.7	40
331	Shape transformation mechanism of silver nanorods in aqueous solution. *Small*, **2011**, 7, 147-56	11	39
330	Aerosol synthesis of silicon nanoparticles with narrow size distribution□Part 1: Experimental investigations. *Journal of Aerosol Science*, **2010**, 41, 998-1007	4.3	39

329	Fast and Slow Ligand Exchange at the Surface of Colloidal Gold Nanoparticles. *Journal of Physical Chemistry C*, **2016**, 120, 1673-1682	3.8	38
328	Simultaneous Identification of Spectral Properties and Sizes of Multiple Particles in Solution with Subnanometer Resolution. *Angewandte Chemie - International Edition*, **2016**, 55, 11770-4	16.4	37
327	Dynamic range multiwavelength particle characterization using analytical ultracentrifugation. *Nanoscale*, **2016**, 8, 7484-95	7.7	37
326	Shedding light on the growth of gold nanoshells. *ACS Nano*, **2014**, 8, 3088-96	16.7	37
325	Influence of the counterion on the synthesis of ZnO mesocrystals under solvothermal conditions. *Chemistry - A European Journal*, **2011**, 17, 2923-30	4.8	37
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323	Synthesis of amphiphilic silver nanoparticles in nanoreactors from invertible polyester. *Langmuir*, **2007**, 23, 360-3	4	37
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321	Invertible architectures from amphiphilic polyesters. *Langmuir*, **2006**, 22, 1946-8	4	36
320	Quantitative evaluation of size selective precipitation of Mn-doped ZnS quantum dots by size distributions calculated from UV/Vis absorbance spectra. *Journal of Nanoparticle Research*, **2013**, 15, 1	2.3	35
319	Influence of particle size and concentration on the second-harmonic signal generated at colloidal surfaces. *Applied Physics B: Lasers and Optics*, **2007**, 87, 333-339	1.9	35
318	Investigation of the size-property relationship in CuInS2 quantum dots. *Nanoscale*, **2015**, 7, 18105-18	7.7	34
317	Relation of Nanostructure and Recombination Dynamics in a Low-Temperature Solution-Processed CuInS2 Nanocrystalline Solar Cell. *Advanced Energy Materials*, **2013**, 3, 1589-1596	21.8	34
316	A comprehensive study on the mechanism behind formation and depletion of Cu2ZnSnS4 (CZTS) phases. *CrystEngComm*, **2015**, 17, 6972-6984	3.3	34
315	Tuning the size and the optical properties of ZnO mesocrystals synthesized under solvothermal conditions. *Nanoscale*, **2012**, 4, 864-73	7.7	34
314	Three-dimensional simulation of viscous-flow agglomerate sintering. *Physical Review E*, **2009**, 80, 026319	2.4	34
313	Characterization of the grinding behaviour in a single particle impact device: studies on pharmaceutical powders. *European Journal of Pharmaceutical Sciences*, **2008**, 34, 45-55	5.1	34
312	Design of a new invertible polymer coating on a solid surface and its effect on dispersion colloidal stability. *Langmuir*, **2006**, 22, 6498-506	4	34

311	A Combined SAXS/SANS Study for the in Situ Characterization of Ligand Shells on Small Nanoparticles: The Case of ZnO. *Langmuir*, **2015**, 31, 10130-6	4	33
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309	A novel apparatus for in situ compression of submicron structures and particles in a high resolution SEM. *Review of Scientific Instruments*, **2012**, 83, 095105	1.7	33
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307	Polyurethane/silver-nanocomposites with enhanced silver ion release using multifunctional invertible polyesters. *Journal of Materials Chemistry*, **2011**, 21, 4377		33
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304	Advanced Multiwavelength Detection in Analytical Ultracentrifugation. *Analytical Chemistry*, **2018**, 90, 1280-1291	7.8	32
303	Enhancing In Vitro Bioactivity of Melt-Derived 45S5 Bioglass□ by Comminution in a Stirred Media Mill. *Journal of the American Ceramic Society*, **2014**, 97, 150-156	3.8	31
302	A population balance model of quantum dot formation: Oriented growth and ripening of ZnO. *Chemical Engineering Science*, **2012**, 70, 4-13	4.4	31
301	Grinding in an air classifier mill □Part I: Characterisation of the one-phase flow. *Powder Technology* , **2011**, 211, 19-27	5.2	31
300	Gas phase temperature measurements in the liquid and particle regime of a flame spray pyrolysis process using O2-based pure rotational coherent anti-Stokes Raman scattering. *Applied Optics*, **2012**, 51, 6063-75	1.7	31
299	Modeling adhesion forces between deformable bodies by FEM and Hamaker summation. *Langmuir*, **2008**, 24, 1459-68	4	31
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297	Production of spherical wax and polyolefin microparticles by melt emulsification for additive manufacturing. *Chemical Engineering Science*, **2016**, 141, 282-292	4.4	30
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295	The influence of dispersing and stabilizing of indium tin oxide nanoparticles upon the characteristic properties of thin films. *Thin Solid Films*, **2009**, 517, 1624-1629	2.2	30
294	Simulation of structure and mobility of aggregates formed by simultaneous coagulation, sintering and surface growth. *Journal of Aerosol Science*, **2009**, 40, 950-964	4.3	30

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292	Production of sub-micron particles by wet comminution in stirred media mills. *Journal of Materials Science*, **2004**, 39, 5223-5226	4.3	30
291	Indentation and self-healing mechanisms of a self-assembled monolayer--a combined experimental and modeling study. *Journal of the American Chemical Society*, **2014**, 136, 10718-27	16.4	29
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287	Carboxylate Ion Pairing with Alkali-Metal Ions for □Lactoglobulin and Its Role on Aggregation and Interfacial Adsorption. *Journal of Physical Chemistry B*, **2015**, 119, 5505-17	3.4	28
286	Study of amphiphilic polyester micelles by hyper-rayleigh scattering: invertibility and phase transfer. *Journal of Physical Chemistry B*, **2008**, 112, 6338-43	3.4	28
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284	First Studies on the Rheological Behavior of Suspensions in Ionic Liquids. *Chemical Engineering and Technology*, **2006**, 29, 1347-1354	2	28
283	Mechano-Chemical Changes of Nano Sized □Al2O3 During Wet Dispersion in Stirred Ball Mills. *Particle and Particle Systems Characterization*, **2004**, 21, 31-38	3.1	28
282	Production of polyamide 11 microparticles for Additive Manufacturing by liquid-liquid phase separation and precipitation. *Chemical Engineering Science*, **2019**, 197, 11-25	4.4	28
281	Determination of the two-dimensional distributions of gold nanorods by multiwavelength analytical ultracentrifugation. *Nature Communications*, **2018**, 9, 4898	17.4	28
280	Liquid filtration of nanoparticles through track-etched membrane filters under unfavorable and different ionic strength conditions: Experiments and modeling. *Journal of Membrane Science*, **2017**, 524, 682-690	9.6	27
279	Magn□-Phases in Anatase Strongly Promote Cocatalyst-Free Photocatalytic Hydrogen Evolution. *ACS Catalysis*, **2019**, 9, 3627-3632	13.1	27
278	Quantitative investigation of the fragmentation process and defect density evolution of oxo-functionalized graphene due to ultrasonication and milling. *Carbon*, **2016**, 96, 897-903	10.4	27
277	Correlation of Enhanced Strength and Internal Structure for Heat-Treated Submicron St□ber Silica Particles. *Particle and Particle Systems Characterization*, **2014**, 31, 664-674	3.1	27
276	Control of coating properties by tailored particle interactions: relation between suspension rheology and film structure. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2003**, 225, 49-61	5.1	27

275	Functionalization of steel surfaces with organic acids: Influence on wetting and corrosion behavior. *Applied Surface Science*, **2017**, 404, 326-333	6.7	26
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270	Facile route to morphologically tailored silver patches on colloidal particles. *Langmuir*, **2010**, 26, 13564-74	4	26
269	Aerosol synthesis of silicon nanoparticles with narrow size distribution—Part 2: Theoretical analysis of the formation mechanism. *Journal of Aerosol Science*, **2010**, 41, 1008-1019	4.3	26
268	Second Harmonic Generation Spectroscopy as a Method for In Situ and Online Characterization of Particle Surface Properties. *Particle and Particle Systems Characterization*, **2006**, 23, 351-359	3.1	26
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262	Effect of polymer species and concentration on the production of mefenamic acid nanoparticles by media milling. *European Journal of Pharmaceutics and Biopharmaceutics*, **2016**, 98, 98-107	5.7	24
261	Painting by numbers: nanoparticle-based colorants in the post-empirical age. *Advanced Materials*, **2011**, 23, 2554-70	24	24
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259	2D analysis of polydisperse core-shell nanoparticles using analytical ultracentrifugation. *Analyst, The*, **2016**, 142, 206-217	5	23
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256	Production of spherical semi-crystalline polycarbonate microparticles for Additive Manufacturing by liquid-liquid phase separation. *Powder Technology*, **2018**, 335, 275-284	5.2	23
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254	Control of particle interfaces – the critical issue in nanoparticle technology. *Advanced Powder Technology*, **2003**, 14, 411-426	4.6	23
253	Elucidation of the Formation Mechanism of Metal–Organic Frameworks via in-Situ Raman and FTIR Spectroscopy under Solvothermal Conditions. *Journal of Physical Chemistry C*, **2018**, 122, 12267-12278	3.8	23
252	FIMOR: An efficient simulation for ZnO quantum dot ripening applied to the optimization of nanoparticle synthesis. *Chemical Engineering Journal*, **2015**, 260, 706-715	14.7	22
251	Quantitative evaluation of nanoparticle classification by size-exclusion chromatography. *Powder Technology*, **2018**, 339, 264-272	5.2	22
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249	Classification of Zinc Sulfide Quantum Dots by Size: Insights into the Particle Surface–Solvent Interaction of Colloids. *Journal of Physical Chemistry C*, **2015**, 119, 4009-4022	3.8	22
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