Peter J Skrdla

List of Publications by Citations

49 papers	735 citations	16 h-index	24 g-index
51 ext. papers	772 ext. citations	4 avg, IF	4.73 L-index

#	Paper	IF	Citations
49	Practical comparison of 2.7 microm fused-core silica particles and porous sub-2 microm particles for fast separations in pharmaceutical process development. *Journal of Pharmaceutical and Biomedical Analysis*, **2010**, 51, 131-7	3.5	74
48	Semiempirical equations for modeling solid-state kinetics based on a Maxwell-Boltzmann distribution of activation energies: applications to a polymorphic transformation under crystallization slurry conditions and to the thermal decomposition of AgMnO4 crystals. *Journal of Physical Chemistry B*, **2005**, 109, 10611-9	3.4	55
47	Preparation of polyetherol-appended sulfur porphyrazines and investigations of peripheral metal ion binding in polar solvents. *Inorganic Chemistry*, **2000**, 39, 3963-9	5.1	52
46	Sol-gel-based, planar waveguide sensor for water vapor. *Analytical Chemistry*, **1999**, 71, 1332-7	7.8	39
45	Crystallizations, solid-state phase transformations and dissolution behavior explained by dispersive kinetic models based on a Maxwell-Boltzmann distribution of activation energies: theory, applications, and practical limitations. *Journal of Physical Chemistry A*, **2009**, 113, 9329-36	2.8	37
44	Use of Dispersive Kinetic Models for Nucleation and Denucleation to Predict Steady-State Nanoparticle Size Distributions and the Role of Ostwald Ripening. *Journal of Physical Chemistry C*, **2012**, 116, 214-225	3.8	30
43	Kinetics and Thermodynamics of Efficient Chiral Symmetry Breaking in Nearly Racemic Mixtures of Conglomerate Crystals. *Crystal Growth and Design*, **2011**, 11, 1957-1965	3.5	28
42	Roles of nucleation, denucleation, coarsening, and aggregation kinetics in nanoparticle preparations and neurological disease. *Langmuir*, **2012**, 28, 4842-57	4	27
41	Disproportionation of a crystalline citrate salt of a developmental pharmaceutical compound: characterization of the kinetics using pH monitoring and online Raman spectroscopy plus quantitation of the crystalline free base form in binary physical mixtures using FT-Raman, XRPD and DSC. *Journal of Pharmaceutical and Biomedical Analysis*, **2014**, 90, 186-91	3.5	25
40	A simple model for complex dissolution kinetics: a case study of norfloxacin. *Journal of Pharmaceutical and Biomedical Analysis*, **2007**, 45, 251-6	3.5	25
39	Use of Dispersive Kinetic Models To Describe the Rate of Metal Nanoparticle Self-Assembly. *Chemistry of Materials*, **2008**, 20, 3-4	9.6	24
38	Use of Coupled Rate Equations To Describe Nucleation-and-Branching Rate-Limited Solid-State Processes. *Journal of Physical Chemistry A*, **2004**, 108, 6709-6712	2.8	21
37	Use of a quality-by-design approach to justify removal of the HPLC weight % assay from routine API stability testing protocols. *Journal of Pharmaceutical and Biomedical Analysis*, **2009**, 50, 794-6	3.5	20
36	A collision theory-based derivation of semiempirical equations for modeling dispersive kinetics and their application to a mixed-phase crystal decomposition. *Journal of Physical Chemistry A*, **2006**, 110, 11494-500	2.8	19
35	Physicochemically Relevant Modeling of Nucleation-And-Growth Kinetics: Investigation of Additive Effects on the Solvent-Mediated Phase Transformation of Carbamazepine. *Crystal Growth and Design*, **2008**, 8, 4185-4189	3.5	16
34	Dispersive kinetic models for isothermal solid-state conversions and their application to the thermal decomposition of oxacillin. *Thermochimica Acta*, **2007**, 453, 14-20	2.9	16
33	An HPLC chromatographic reactor approach for investigating the hydrolytic stability of a pharmaceutical compound. *Journal of Pharmaceutical and Biomedical Analysis*, **2006**, 41, 883-90	3.5	15

32	GC–MS Study of the formation of alkoxysilanes from a sol–gel precursor in a hydrophobic solution: A potential new route to hybrid molecular imprinted polymers. *Journal of Non-Crystalline Solids*, **2006**, 352, 3302-3309	3.9	14
31	The amorphous state: first-principles derivation of the Gordon-Taylor equation for direct prediction of the glass transition temperature of mixtures; estimation of the crossover temperature of fragile glass formers; physical basis of the "Rule of 2/3". *Physical Chemistry Chemical Physics*, **2017**, 19, 20523-20532	3.6	13
30	Thermal decomposition of tert-butyl peroxide in a gas chromatographic reactor: A comparison of kinetic approaches. *International Journal of Chemical Kinetics*, **2004**, 36, 386-393	1.4	13
29	Comparison of two types of dispersive kinetic approaches in relation to time-dependent marcus theory. *Journal of Physical Chemistry A*, **2007**, 111, 11809-13	2.8	12
28	Reduction of Indicator Leaching from Doped Sol-Gels by Attachment of Macromolecular Carriers. *Applied Spectroscopy*, **1999**, 53, 785-791	3.1	12
27	Activation energy distributions predicted by dispersive kinetic models for nucleation and denucleation: anomalous diffusion resulting from quantization. *Journal of Physical Chemistry A*, **2011**, 115, 6413-25	2.8	11
26	Statistical thermodynamic description of homogeneous dispersive kinetics. *Journal of Physical Chemistry A*, **2007**, 111, 4248-51	2.8	11
25	Practical Estimation of Amorphous Solubility Enhancement Using Thermoanalytical Data: Determination of the Amorphous/Crystalline Solubility Ratio for Pure Indomethacin and Felodipine. *Journal of Pharmaceutical Sciences*, **2016**, 105, 2625-2630	3.9	11
24	Semi-empirical model fits femtosecond gas phase reaction kinetics. *Chemical Physics Letters*, **2006**, 419, 130-133	2.5	10
23	Starch-iodine films respond to water vapor. *Analytica Chimica Acta*, **2002**, 455, 49-52	6.6	9
22	Crystallization of glycine during freezing of a 40/60 w/w sucrose/glycine excipient system: an alternative to the Johnson-Mehl-Avrami (JMA) equation for modeling dispersive kinetics. *Journal of Pharmaceutical Sciences*, **2007**, 96, 2107-10	3.9	8
21	Modeling Recrystallization Kinetics Following the Dissolution of Amorphous Drugs. *Molecular Pharmaceutics*, **2020**, 17, 219-228	5.6	8
20	Dynamical Considerations for Kinetic Methods in Thermal Analysis. *Journal of Physics and Chemistry of Solids*, **2013**, 74, 1375-1379	3.9	7
19	Predicted amorphous solubility and dissolution rate advantages following moisture sorption: Case studies of indomethacin and felodipine. *International Journal of Pharmaceutics*, **2019**, 555, 100-108	6.5	7
18	Predicting the solubility enhancement of amorphous drugs and related phenomena using basic thermodynamic principles and semi-empirical kinetic models. *International Journal of Pharmaceutics* , **2019**, 567, 118465	6.5	6
17	Statistical kinetic approach for modeling lifespan. *Biophysical Chemistry*, **2005**, 118, 22-4	3.5	6
16	Can we trust kinetic methods of thermal analysis?. *Analyst, The*, **2020**, 145, 745-749	5	6
15	Dispersive kinetic models predict variation of the activation energy with extent of conversion observed experimentally in isoconversional data. *Thermochimica Acta*, **2014**, 578, 68-73	2.9	5

14	Comment on Fitting and Interpreting Transition-Metal Nanocluster Formation and Other Sigmoidal-Appearing Kinetic Data: A More Thorough Testing of Dispersive Kinetic vs Chemical-Mechanism-Based Equations and Treatments for 4-Step Type Kinetic Data. *Chemistry of Materials*, **2010**, 22, 2685-2686	9.6	5
13	Observation of oscillatory behavior during the dissolution of a pharmaceutical compound and evidence for the existence of an inverse Ostwald rule. *Physical Chemistry Chemical Physics*, **2010**, 12, 3788-98	3.6	5
12	Use of real-time FT-IR monitoring of a pharmaceutical compound under stress atmospheric conditions to characterize its solid-state degradation kinetics. *International Journal of Chemical Kinetics*, **2010**, 42, 25-36	1.4	5
11	Planar Integrated Optical Waveguide Sensor for Isopropyl Alcohol in Aqueous Media. *Journal of Sol-Gel Science and Technology*, **2002**, 24, 167-173	2.3	5
10	Atomistic Description of Two-Dimensional Hexagonal Close-Packed Critical Nuclei Exhibiting Quantization of the Activation Energy Barrier. *Crystal Growth and Design*, **2013**, 13, 1970-1977	3.5	4
9	Semi-empirical description of the constant in the equation of state for interfacial tension. *Journal of Colloid and Interface Science*, **2011**, 360, 313-6	9.3	4
8	Investigations into the chromatographic behavior of a doxorubicin-peptide conjugate. *Journal of Chromatography A*, **2002**, 973, 27-38	4.5	4
7	On the Stability of Nano-formulations Prepared by Direct Synthesis: Simulated Ostwald Ripening of a Typical Nanocrystal Distribution Post-nucleation. *AAPS PharmSciTech*, **2019**, 20, 34	3.9	4
6	A high-temperature liquid chromatographic reactor approach for investigating the solvolytic stability of a pharmaceutical compound and an investigation of its retention behavior on a C18-modified zirconia stationary phase. *Journal of Pharmaceutical and Biomedical Analysis*, **2008**, 47, 312-9	3.5	2
5	Modeling Sigmoidal Transients Using Dispersive Kinetic Models to Predict Nanoparticle Size Distributions. *Crystal Growth and Design*, **2021**, 21, 1843-1853	3.5	2
4	Investigation into the Gaussian time-dependence of the rate coefficient in dispersive kinetic models applied to simple gas-phase chemical reactions. *Molecular Physics*, **2014**, 112, 97-100	1.7	1
3	Estimating the maximal solubility advantage of drug salts. *International Journal of Pharmaceutics*, **2021**, 595, 120228	6.5	0
2	Predicting the Solubility Advantage of Amorphous Drugs: Effect of pH. *Journal of Pharmaceutical Sciences*, **2020**, 109, 1627-1629	3.9	
1	Modelling sub-micron particle slip flow in liquid chromatography. *Talanta*, **2020**, 208, 120400	6.2	