GÃ©rard Coquerel

List of Publications by Year
in descending order

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109 papers	2,319 citations	201674 27 h-index	276875 41 g-index
115 all docs	115 docs citations	115 times ranked	1683 citing authors

#	Article	IF	Citations
1	Mechanism of Several Solidâ^'Solid Transformations between Dihydrated and Anhydrous Copper(II) 8-Hydroxyquinolinates. Proposition for a Unified Model for the Dehydration of Molecular Crystals. Chemistry of Materials, 1996, 8, 2247-2258.	6.7	138
2	Crystallization of molecular systems from solution: phase diagrams, supersaturation and other basic concepts. Chemical Society Reviews, 2014, 43, 2286-2300.	38.1	114
3	Pitfalls and rewards of preferential crystallization. CrystEngComm, 2010, 12, 1983.	2.6	106
4	Preferential Crystallization. Topics in Current Chemistry, 2006, 269, 1-51.	4.0	99
5	Spotting Conglomerates by Second Harmonic Generation. Crystal Growth and Design, 2009, 9, 2713-2718.	3.0	65
6	Impact of Molecular Flexibility on Double Polymorphism, Solid Solutions and Chiral Discrimination during Crystallization of Diprophylline Enantiomers. Molecular Pharmaceutics, 2013, 10, 3850-3861.	4.6	55
7	Oscillating Crystallization in Solution between (+)- and (â^')-5-Ethyl-5-methylhydantoin under the Influence of Stirring. Journal of Physical Chemistry B, 2002, 106, 646-652.	2.6	53
8	Diastereomeric resolution rationalized by phase diagrams under the actual conditions of the experimental process. Tetrahedron: Asymmetry, 2004, 15, 2455-2465.	1.8	53
9	Preferential crystallisation and comparative crystal growth study between pure enantiomer and racemic mixture of a chiral molecule: 5-ethyl-5-methylhydantoin. Chemical Engineering Science, 2001, 56, 2281-2294.	3.8	51
10	Preferential crystallization in an unusual case of conglomerate with partial solid solutions. Tetrahedron: Asymmetry, 2007, 18, 821-831.	1.8	51
11	Ultrasound-Enhanced Deracemization: Toward the Existence of Agonist Effects in the Interpretation of Spontaneous Symmetry Breaking. Crystal Growth and Design, 2015, 15, 2151-2155.	3.0	51
12	A Novel Design Approach To Scale Up the Temperature Cycle Enhanced Deracemization Process: Coupled Mixed-Suspension Vessels. Crystal Growth and Design, 2016, 16, 6461-6467.	3.0	40
13	Use of Programmed Damped Temperature Cycles for the Deracemization of a Racemic Suspension of a Conglomerate Forming System. Organic Process Research and Development, 2017, 21, 623-630.	2.7	40
14	Attrition-enhanced preferential crystallization combined with racemization leading to redissolution of the antipode nuclei. Tetrahedron: Asymmetry, 2009, 20, 2769-2771.	1.8	37
15	Polymorphic Phase Transition in 4â€²-Hydroxyacetophenone: Equilibrium Temperature, Kinetic Barrier, and the Relative Stability of Zâ€² = 1 and Zâ€² = 2 Forms. Crystal Growth and Design, 2017, 17, 1918-1932.	3.0	37
16	The â€˜structural purityâ€™ of molecular solidsâ€”An elusive concept?. Chemical Engineering and Processing: Process Intensification, 2006, 45, 857-862.	3.6	35
17	Mathematical Modeling of Chiral Symmetry Breaking due to Differences in Crystal Growth Kinetics. Chemical Engineering and Technology, 2014, 37, 1329-1339.	1.5	34
18	Complex structures arising from the self-assembly of a simple organic salt. Nature, 2021, 590, 275-278.	27.8	34

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19	Chiral Discrimination at the Solid State of Methyl 2-(Diphenylmethylsulfinyl)acetate. Crystal Growth and Design, 2007, 7, 1599-1607.	3.0	33
20	Attrition Induced Deracemisation of 2-Fluorophenylglycine. Organic Process Research and Development, 2015, 19, 302-308.	2.7	31
21	Structural Aspects of Solid Solutions of Enantiomers. Current Pharmaceutical Design, 2016, 22, 4929-4941.	1.9	30
22	Mechanisms of Reversible Phase Transitions in Molecular Crystals: Case of Ciclopirox. Chemistry of Materials, 2015, 27, 6360-6373.	6.7	29
23	Simple model designed to generate new crystal structures derived from a mother phase; application to molecular compounds. Acta Crystallographica Section B: Structural Science, 2002, 58, 662-672.	1.8	28
24	Crystal structure of a hybrid saltâ€“cocrystal and its resolution by preferential crystallization: ((Â±)trans-N,Nâ€²-dibenzyldiaminocyclohexane)(2,3-dichlorophenylacetic acid)₄. CrystEngComm, 2012, 14, 103-111.	2.6	28
25	Monotropic Transition Mechanism of m-Hydroxybenzoic Acid Investigated by Temperature-Resolved Second Harmonic Generation. Crystal Growth and Design, 2013, 13, 3697-3704.	3.0	28
26	Relevance of the Second Harmonic Generation to Characterize Crystalline Samples. Chemical Engineering and Technology, 2015, 38, 971-983.	1.5	27
27	Crystallization kinetics and molecular mobility of an amorphous active pharmaceutical ingredient: A case study with Biclotymol. International Journal of Pharmaceutics, 2015, 490, 248-257.	5.2	27
28	Formation of new polymorphs without any nucleation step. Desolvation of the rimonabant monohydrate: directional crystallisation concomitant to smooth dehydration. Faraday Discussions, 2015, 179, 475-488.	3.2	26
29	A Priori Assessment of the Maximum Possible Entrainment Effect Attainable during Preferential Crystallization. The Case of the Simultaneous Resolution of (Â±)-Ephedrine and (Â±)-Mandelic Acid. Bulletin of the Chemical Society of Japan, 2004, 77, 79-86.	3.2	25
30	Practical Role of Racemization Rates in Deracemization Kinetics and Process Productivities. Crystal Growth and Design, 2018, 18, 6417-6420.	3.0	25
31	Transformation of an active pharmaceutical ingredient upon high-energy milling: A process-induced disorder in Biclotymol. International Journal of Pharmaceutics, 2016, 499, 67-73.	5.2	24
32	Cocrystals of Praziquantel: Discovery by Network-Based Link Prediction. Crystal Growth and Design, 2021, 21, 3428-3437.	3.0	24
33	Spotting a Conglomerate Is Just Halfway to Achieving a Preparative Resolution by Preferential Crystallization. Organic Process Research and Development, 2012, 16, 286-293.	2.7	23
34	Solubility of chiral species as function of the enantiomeric excess. Journal of Pharmacy and Pharmacology, 2015, 67, 869-878.	2.4	23
35	Resolution of Baclofenium Hydrogenomaleate By Using Preferential Crystallization. A First Case of Complete Solid Solution at High Temperature and a Large Miscibility Gap in the Solid State. Crystal Growth and Design, 2019, 19, 4793-4801.	3.0	23
36	Resolution of an Atropisomeric Naphthamide by Second-Order Asymmetric Transformation: A Highly Productive Technique. Organic Process Research and Development, 2019, 23, 1197-1203.	2.7	23

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37	Molecular mobility of amorphous N-acetyl-Î±-methylbenzylamine and Debye relaxation evidenced by dielectric relaxation spectroscopy and molecular dynamics simulations. Physical Chemistry Chemical Physics, 2019, 21, 702-717.	2.8	23
38	Chiral Discrimination in the Solid State: Applications to Resolution and Deracemization. , 2015, , 393-420.		22
39	How far can an unstable racemic compound affect the performances of preferential crystallization? Example with (R) and (Sâ€Š)-Î±-methylbenzylamine chloroacetateâ€Šâ€. Journal of the Chemical Society Perkin Transactions II, 1998, , 2211-2220.	0.9	21
40	Successful Application of the Derived Crystal Packing (DCP) Model in Resolving the Crystal Structure of a Metastable Polymorph of (Â±) Modafinilâ€. Crystal Growth and Design, 2004, 4, 1143-1151.	3.0	21
41	Incidence of crystal growth conditions on the formation of macroscopic liquid inclusions in ciclopirox crystals. Journal of Crystal Growth, 2012, 342, 72-79.	1.5	20
42	Crystallization of Chiral Molecules. , 2015, , 951-1002.		20
43	Enhanced Second Harmonic Generation from an Organic Self-Assembled Eutectic Binary Mixture: A Case Study with 3-Nitrobenzoic and 3,5-Dinitrobenzoic Acids. Crystal Growth and Design, 2015, 15, 946-960.	3.0	18
44	Molecular Relaxations in Supercooled Liquid and Glassy States of Amorphous Quinidine: Dielectric Spectroscopy and Density Functional Theory Approaches. Journal of Physical Chemistry B, 2016, 120, 7579-7592.	2.6	18
45	Solvate Formation of Bis(demethoxy)curcumin: Crystal Structure Analyses and Stability Investigations. Crystal Growth and Design, 2019, 19, 854-867.	3.0	18
46	Pleconaril Polymorphs:â€‰ Crystal Structures of Form I and Form III, Evidence of the Enantiotropy, and Assessment of the Structural Purity. Crystal Growth and Design, 2004, 4, 1237-1244.	3.0	17
47	Chiral Symmetry Breaking and Deracemization of Sodium Chlorate in Turbulent Flow. Crystal Growth and Design, 2018, 18, 297-306.	3.0	17
48	Enabling Direct Preferential Crystallization in a Stable Racemic Compound System. Molecular Pharmaceutics, 2019, 16, 4670-4676.	4.6	17
49	Temperature cycle induced deracemization. Mendeleev Communications, 2020, 30, 395-405.	1.6	17
50	Resolution by Preferential Crystallization of Proxyphylline by Using Its Salicylic Acid Monohydrate Coâ€Crystal. Chemical Engineering and Technology, 2020, 43, 1093-1098.	1.5	17
51	A Kinetic/Thermodynamic Origin of Regular Chiral Fluctuation or Symmetry Breaking Unique to Preferential Enrichment. Chemistry - A European Journal, 2016, 22, 11660-11666.	3.3	16
52	New Intermediate Polymorph of 1-Fluoro-adamantane and Its Second-Order-like Transition toward the Low Temperature Phase. Crystal Growth and Design, 2017, 17, 3395-3401.	3.0	16
53	Kryptoracemic compound hunting and frequency in the Cambridge Structural Database. CrystEngComm, 2020, 22, 7407-7419.	2.6	16
54	Discovery of New Proxyphylline-Based Chiral Cocrystals: Solid State Landscape and Dehydration Mechanism. Crystal Growth and Design, 2020, 20, 3842-3850.	3.0	16

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55	Mechanism of Hydration and Dehydration of Ciclopirox Ethanolamine (1:1). Crystal Growth and Design, 2009, 9, 3918-3927.	3.0	15
56	Enhancement of the Physical and Chemical Stability of Amorphous Drugâ€“Polymer Mixtures via Cryogenic Comilling. Macromolecules, 2018, 51, 9382-9392.	4.8	15
57	Recognition of enantiomers through morphology of single crystals; application to some 5-alkyl-5-aryl-hydantoin derivatives. Journal of Crystal Growth, 1993, 130, 173-180.	1.5	14
58	Access to Several Polymorphic Forms of (Â±)-Modafinil by Using Various Solvationâ€“Desolvation Processes. Crystal Growth and Design, 2016, 16, 396-405.	3.0	14
59	Optimization of an Antisolvent Method for RDX Recrystallization: Influence on Particle Size and Internal Defects. Crystal Growth and Design, 2020, 20, 130-138.	3.0	14
60	Investigation of Drugâ€“Excipient Interactions in Biclotymol Amorphous Solid Dispersions. Molecular Pharmaceutics, 2018, 15, 1112-1125.	4.6	13
61	Insights on the Physical State Reached by an Active Pharmaceutical Ingredient upon High-Energy Milling. Journal of Physical Chemistry B, 2017, 121, 5142-5150.	2.6	12
62	Unique Superparamagneticâ€like Behavior Observed in Nonâ€Ïâ€delocalized Nitroxide Diradical Compounds Showing Discotic Liquid Crystalline Phase. Chemistry - A European Journal, 2018, 24, 17293-17302.	3.3	12
63	Temperature Cycling Induced Deracemization of NaClO₃ under the Influence of Na₂S₂O₆. Crystal Growth and Design, 2020, 20, 414-421.	3.0	12
64	A Hybrid Mechanism in Chiral Discrimination Induced by Crystallization of Supramolecular Compounds. Journal of Physical Chemistry B, 2012, 116, 6027-6040.	2.6	11
65	Growth Rate Dispersion at the Singleâ€Crystal Level. Chemical Engineering and Technology, 2015, 38, 1011-1016.	1.5	11
66	Prenucleation Selfâ€Assembly and Chiral Discrimination Mechanisms during Solution Crystallisation of Racemic Diprophylline. Chemistry - A European Journal, 2016, 22, 16103-16112.	3.3	11
67	Precise Urea/Water Eutectic Composition by Temperatureâ€Resolved Second Harmonic Generation. Chemical Engineering and Technology, 2016, 39, 1326-1332.	1.5	11
68	In Situ Observation of Polymorphic Transition during Crystallization of Organic Compounds Showing Preferential Enrichment By Means Of Temperature-Controlled Video-Microscopy and Time-Resolved X-ray Powder Diffraction. Crystal Growth and Design, 2017, 17, 671-676.	3.0	11
69	Vitrification of two active pharmaceutical ingredients by fast scanning calorimetry: From structural relaxation to nucleation phenomena. International Journal of Pharmaceutics, 2018, 536, 426-433.	5.2	11
70	Resolution of Pasteur salts by auto-seeded preferential crystallization. Mendeleev Communications, 2003, 13, 95-96.	1.6	10
71	Crystal Growth, Structure, and Polymorphic Behavior of an Ionic Liquid: Phthalate Derivative of N-Butyl,N-methylimidazolium Hexafluorophosphate. Chemistry of Materials, 2014, 26, 4151-4162.	6.7	10
72	Crystallization from the Amorphous State of a Pharmaceutical Compound: Impact of Chirality and Chemical Purity. Crystal Growth and Design, 2017, 17, 337-346.	3.0	10

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73	Preparative resolution of (Â±)-trans-1,2-diaminocyclohexane by means of preferential crystallization of its citrate monohydrate. Tetrahedron: Asymmetry, 2010, 21, 2212-2217.	1.8	9
74	Racemic compound versus conglomerate: concerning the crystal chemistry of the triazoylketone, 1-(4-chlorophenyl)-4,4-dimethyl-2-(1H-1,2,4-triazol-1-yl)pentan-3-one. CrystEngComm, 2014, 16, 4377-4381.	2.6	9
75	Family of Conglomerate-Forming Systems Composed of Chlocyphos and Alkyl-amine. Assessment of Their Resolution Performances by Using Various Modes of Preferential Crystallization. Crystal Growth and Design, 2019, 19, 5173-5183.	3.0	9
76	Spontaneous and Controlled Macroscopic Chiral Symmetry Breaking by Means of Crystallization. Symmetry, 2020, 12, 1796.	2.2	9
77	Structural and Physicochemical Characterization of a Solid Solution Produced by Antisolvent Crystallization of a New Phosphoantigen. Crystal Growth and Design, 2009, 9, 3910-3917.	3.0	8
78	Phenanthrene Purification: Comparison of Zone Melting and Coâ€Crystallization. Chemical Engineering and Technology, 2016, 39, 1317-1325.	1.5	8
79	Impact of chirality on the Glass Forming Ability and the crystallization from the amorphous state of 5-ethyl-5-methylhydantoin, a chiral poor glass former. International Journal of Pharmaceutics, 2018, 540, 11-21.	5.2	8
80	Deracemization in a Complex Quaternary System with a Secondâ€Order Asymmetric Transformation by Using Phase Diagram Studies. Chemistry - A European Journal, 2019, 25, 13890-13898.	3.3	8
81	Continuous chiral resolution of racemic Ibuprofen by diastereomeric salt formation in a Couette-Taylor crystallizer. Chemical Engineering Research and Design, 2022, 178, 95-110.	5.6	8
82	A Novel Mechanism of Preferential Enrichment Phenomenon Observed for the Cocrystal of (RS) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 38 Journal, 2019, 25, 16405-16413.	3.3	7
83	Antisolvent Addition: An Effective Method of Controlled Fluid Inclusion Formation in RDX Crystals. Crystal Growth and Design, 2020, 20, 7120-7128.	3.0	7
84	Evidence of Conglomerate with Partial Solid Solutions in Ethylammonium Chlocyphos. Crystal Growth and Design, 2020, 20, 2562-2569.	3.0	7
85	Binary phase diagrams between phenanthrene and two of its impurities: 9,10-dihydroanthracene and carbazole. European Physical Journal: Special Topics, 2017, 226, 869-880.	2.6	6
86	Chirality impact on physical ageing: An original case of a small organic molecule. Materials Letters, 2018, 228, 141-144.	2.6	6
87	Disappearing Conglomerates, Assessment of the Threat. Crystal Growth and Design, 2019, 19, 7396-7401.	3.0	6
88	Optimization of experimental conditions for the monitoring of nucleation and growth of racemic Diprophylline from the supercooled melt. Journal of Crystal Growth, 2017, 472, 11-17.	1.5	5
89	Limitations of Preferential Enrichment: AÂCase Study on Tryptophan Ethyl Ester Hydrochloride. Chemical Engineering and Technology, 2019, 42, 1500-1504.	1.5	5
90	Solid-State Overview of R-Baclofen: Relative Stability of Forms A, B and C and Characterization of a New Heterosolvate. Journal of Pharmaceutical Sciences, 2021, 110, 3457-3463.	3.3	5

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91	Orderâ€“Disorder Phase Transition between High- and Low-Zâ€² Crystal Structures of the P1 Space Group. Crystal Growth and Design, 2022, 22, 2230-2238.	3.0	5
92	Investigations on the reciprocal ternary system (Â±)-2-phenylpropionic acidâ€“(Â±)-Î±-methylbenzylamine. Impact of an unstable racemic compound on the simultaneous resolution of chiral acids and bases by preferential crystallisationElectronic supplementary information (ESI) available: examination of the crystal growth paths for racemic solutions and the case of non-racemic solutionsâ€”application to the PC. See http://www.rsc.org/suppdata/p2/b1/b100706h/Glossary: A Acidic ion. A Configuration of a ladder; the chir. Perkin Transactions II RSC, 2001, , 2022-2036.	1.1	4
93	Crystallization of Terutroban Sodium Salt Hydrate from the Deliquescent State. Chemical Engineering and Technology, 2015, 38, 999-1005.	1.5	4
94	Impact of a Partial Solid Solution and Water Molecules on the Formation of Fibrous Crystals and Fluid Inclusions. Crystals, 2021, 11, 1188.	2.2	4
95	Chapter 13. Limits of the Co-crystal Concept and Beyond. RSC Drug Discovery Series, 2011, , 300-317.	0.3	3
96	A Possible Infinite Number of Components in a Single Crystalline Phase: On the Isomorphism of Brivaracetamâ€“Guest Molecules. Crystal Growth and Design, 2018, 18, 4807-4810.	3.0	3
97	Synthesis and Characterization of Sodium Dithionate and its Dihydrate. Chemical Engineering and Technology, 2019, 42, 1446-1451.	1.5	3
98	Nucleation behaviour of racemic and enantiopure histidine. CrystEngComm, 2021, 23, 8379-8385.	2.6	3
99	Crystal Structure of (I)Trimebutine Trihydrogenodimaleate.. Analytical Sciences, 1993, 9, 557-559.	1.6	2
100	Limitations during the Resolution of (Â±)â€Epinephrine by Using Tartaric Acid. Chemical Engineering and Technology, 2018, 41, 1086-1092.	1.5	2
101	Deracemization in a Complex Quaternary System with a Secondâ€Order Asymmetric Transformation by Using Phase Diagram Studies. Chemistry - A European Journal, 2019, 25, 13837-13837.	3.3	2
102	Phase Diagrams for Process Design. NATO Science for Peace and Security Series A: Chemistry and Biology, 2017, , 215-233.	0.5	2
103	Impact of chirality on the amorphous state of conglomerate forming systems: a case study of N-acetyl-Î±-methylbenzylamine. Physical Chemistry Chemical Physics, 2021, 23, 24282-24293.	2.8	2
104	Synthesis and X-ray structural studies of the dextro-rotatory enantiomer of methyl Î±-5(4,5,6,7-tetrahydro(3,2-c)thieno pyridyl) (2-chlorophenyl)-acetate isopropylsulfate. Journal of Molecular Structure, 2007, 827, 108-113.	3.6	1
105	Impact of Cooling Profile on Refined Palm Oil Crystallization: Microscopic and Small and Wideâ€Angle Xâ€Ray Scattering Investigations. European Journal of Lipid Science and Technology, 2022, 124, 2100045.	1.5	1
106	Potassium Sulfate: A New Candidate to Explore Non-Photochemical Laser-Induced Nucleation Mechanisms. Crystals, 2021, 11, 1571.	2.2	1
107	Special Chapter Advanced Thermal Science in France. Journal of Thermal Analysis and Calorimetry, 2013, 112, 211-213.	3.6	0
108	Impact of sodium chloride on the expansion of a liquid-liquid miscibility gap in an API/water system. Case study of Brivaracetam. International Journal of Pharmaceutics, 2016, 515, 702-707.	5.2	0

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109	Twenty-Five Yearsâ€™ History, Mechanism, and Generality of Preferential Enrichment as a Complexity Phenomenon. , 2020, , 405-432.		0