

# Dejan-Kresimir Bucar

## List of Publications by Year in descending order

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86  
papers

4,525  
citations

101543

36  
h-index

102487

66  
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all docs

99  
docs citations

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times ranked

5034  
citing authors

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 1  | Supramolecular Control of Reactivity in the Solid State: From Templates to Ladderanes to Metal-Organic Frameworks. <i>Accounts of Chemical Research</i> , 2008, 41, 280-291.   | 15.6 | 613       |
| 2  | Disappearing Polymorphs Revisited. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 6972-6993.   | 13.8 | 281       |
| 3  | A Practical Guide to the Design of Molecular Crystals. <i>Crystal Growth and Design</i> , 2019, 19, 1426-1453.   | 3.0  | 222       |
| 4  | Accelerated aging: a low energy, solvent-free alternative to solvothermal and mechanochemical synthesis of metal-organic materials. <i>Chemical Science</i> , 2012, 3, 2495-2500.  | 7.4  | 181       |
| 5  | Preparation and Reactivity of Nanocrystalline Cocrystals Formed via Sonocrystallization. <i>Journal of the American Chemical Society</i> , 2007, 129, 32-33.   | 13.7 | 150       |
| 6  | The application of design of experiments (DoE) reaction optimisation and solvent selection in the development of new synthetic chemistry. <i>Organic and Biomolecular Chemistry</i> , 2016, 14, 2373-2384.                                       | 2.8  | 141       |
| 7  | Supramolecular Catalysis in the Organic Solid State through Dry Grinding. <i>Angewandte Chemie - International Edition</i> , 2010, 49, 4273-4277.  | 13.8 | 115       |
| 8  | The curious case of (caffeine)·(benzoic acid): how heteronuclear seeding allowed the formation of an elusive cocrystal. <i>Chemical Science</i> , 2013, 4, 4417.   | 7.4  | 115       |
| 9  | Cocrystals of Caffeine and Hydroxybenzoic Acids Composed of Multiple Supramolecular Heterosynthons: Screening via Solution-Mediated Phase Transformation and Structural Characterization. <i>Crystal Growth and Design</i> , 2009, 9, 1932-1943. | 3.0  | 111       |
| 10 | Softening and Hardening of Macro- and Nano-Sized Organic Cocrystals in a Single-Crystal Transformation. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 8642-8646.  | 13.8 | 92        |
| 11 | A Supramolecular Protecting Group Strategy Introduced to the Organic Solid State: Enhanced Reactivity through Molecular Pedal Motion. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 1037-1041.                                    | 13.8 | 92        |
| 12 | Thixotropic Hydrogel Derived from a Product of an Organic Solid-State Synthesis: Properties and Densities of Metal-Organic Nanoparticles. <i>Journal of the American Chemical Society</i> , 2011, 133, 3365-3371.                                | 13.7 | 91        |
| 13 | Co-Crystals of Caffeine and Hydroxy-2-naphthoic Acids: Unusual Formation of the Carboxylic Acid Dimer in the Presence of a Heterosynthon. <i>Molecular Pharmaceutics</i> , 2007, 4, 339-346.   | 4.6  | 90        |
| 14 | Divergent prebiotic synthesis of pyrimidine and 8-oxo-purine ribonucleotides. <i>Nature Communications</i> , 2017, 8, 15270.   | 12.8 | 84        |
| 15 | Prebiotic selection and assembly of proteinogenic amino acids and natural nucleotides from complex mixtures. <i>Nature Chemistry</i> , 2017, 9, 584-589.   | 13.6 | 82        |
| 16 | Pharmaceutical Nano-Cocrystals: Sonochemical Synthesis by Solvent Selection and Use of a Surfactant. <i>Angewandte Chemie - International Edition</i> , 2010, 49, 7284-7288.   | 13.8 | 78        |
| 17 | Ultrasound-Assisted Construction of Halogen-Bonded Nanosized Cocrystals That Exhibit Thermosensitive Luminescence. <i>Chemistry - A European Journal</i> , 2013, 19, 8213-8219.  | 3.3  | 75        |
| 18 | A "hidden" co-crystal of caffeine and adipic acid. <i>Chemical Communications</i> , 2007, , 525-527.   | 4.1  | 74        |

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|----|---|------|-----------|
| 19 | Template-Controlled Reactivity in the Organic Solid State by Principles of Coordination-Driven Self-Assembly. <i>European Journal of Inorganic Chemistry</i> , 2007, 2007, 4559-4568.   | 2.0  | 74        |
| 20 | Highly Luminescent Encapsulated Narrow Bandgap Polymers Based on Diketopyrrolopyrrole. <i>Journal of the American Chemical Society</i> , 2018, 140, 1622-1626.  | 13.7 | 70        |
| 21 | Advantages of mechanochemical cocrystallisation in the solid-state chemistry of pigments: colour-tuned fluorescein cocrystals. <i>CrystEngComm</i> , 2013, 15, 6289.  | 2.6  | 67        |
| 22 | A [2+2] cross-photodimerisation of photostable olefins via a three-component cocrystal solid solution. <i>Chemical Communications</i> , 2012, 48, 1790.   | 4.1  | 66        |
| 23 | Modification of luminescent properties of a coumarin derivative by formation of multi-component crystals. <i>CrystEngComm</i> , 2012, 14, 5121.   | 2.6  | 59        |
| 24 | A sildenafil cocrystal based on acetylsalicylic acid exhibits an enhanced intrinsic dissolution rate. <i>CrystEngComm</i> , 2014, 16, 32-35.  | 2.6  | 59        |
| 25 | New opportunities in crystal engineering – the role of atomic force microscopy in studies of molecular crystals. <i>Chemical Communications</i> , 2012, 48, 9210.   | 4.1  | 55        |
| 26 | Sensing and Discrimination of Explosives at Variable Concentrations with a Large-Pore MOF as Part of a Luminescent Array. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 11618-11626.  | 8.0  | 54        |
| 27 | General application of mechanochemistry to templated solid-state reactivity: rapid and solvent-free access to crystalline supermolecules. <i>Chemical Communications</i> , 2008, , 5713.  | 4.1  | 52        |
| 28 | Mechanical Properties of a Series of Macro- and Nanodimensional Organic Cocrystals Correlate with Atomic Polarizability. <i>Journal of the American Chemical Society</i> , 2015, 137, 12768-12771.                                      | 13.7 | 48        |
| 29 | On the predictability of supramolecular interactions in molecular cocrystals – the view from the bench. <i>CrystEngComm</i> , 2016, 18, 5434-5439.  | 2.6  | 47        |
| 30 | Single-crystal-to-single-crystal direct cross-linking and photopolymerisation of a discrete Ag( $\mu$ -1,3,5-triazole) complex to give a 1D polycyclobutane coordination polymer. <i>Chemical Communications</i> , 2013, 49, 1064-1066. | 4.1  | 46        |
| 31 | Sonocrystallization Yields Monoclinic Paracetamol with Significantly Improved Compaction Behavior. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 249-253.  | 13.8 | 46        |
| 32 | Onion-Shell Metal-Organic Polyhedra (MOPs): A General Approach to Decorate the Exteriors of MOPs using Principles of Supramolecular Chemistry. <i>Journal of the American Chemical Society</i> , 2008, 130, 14366-14367.                | 13.7 | 45        |
| 33 | Stereospecific and quantitative photodimerisation of terminal olefins in the solid state. <i>Chemical Communications</i> , 2010, 46, 4956.  | 4.1  | 42        |
| 34 | Supramolecular Complexes of Sulfadiazine and Pyridines: Reconfigurable Exteriors and Chameleon-like Behavior of Tautomers at the Co-Crystal-Salt Boundary. <i>Crystal Growth and Design</i> , 2013, 13, 393-403.                        | 3.0  | 41        |
| 35 | –Click–labeling strategy for M(CO) <sub>3</sub> (M = Re, <sup>99m</sup> Tc) prostate cancer targeted Flutamide agents. <i>Dalton Transactions</i> , 2010, 39, 1926.   | 3.3  | 37        |
| 36 | From co-crystals to functional thin films: photolithography using [2+2] photodimerization. <i>Chemical Science</i> , 2013, 4, 4304.   | 7.4  | 37        |

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|----|---|------|-----------|
| 37 | Synthon Hierarchies in Crystal Forms Composed of Theophylline and Hydroxybenzoic Acids: Cocrystal Screening via Solution-Mediated Phase Transformation. <i>Crystal Growth and Design</i> , 2014, 14, 5318-5328.   | 3.0  | 37        |
| 38 | Organic Nanocrystals of the Resorcinarene Hexamer via Sonochemistry: Evidence of Reversed Crystal Growth Involving Hollow Morphologies. <i>Journal of the American Chemical Society</i> , 2012, 134, 6900-6903.   | 13.7 | 36        |
| 39 | Selective prebiotic conversion of pyrimidine and purine anhydronucleosides into Watson-Crick base-pairing arabino-furanosyl nucleosides in water. <i>Nature Communications</i> , 2018, 9, 4073.   | 12.8 | 36        |
| 40 | Are Oxygen and Sulfur Atoms Structurally Equivalent in Organic Crystals?. <i>Crystal Growth and Design</i> , 2017, 17, 827-833.   | 3.0  | 35        |
| 41 | “Masked synthons”™ in crystal engineering: insulated components in acetaminophen cocrystal hydrates. <i>CrystEngComm</i> , 2013, 15, 4816.  | 2.6  | 33        |
| 42 | A 1:1 Cocrystal of Caffeine and 2-Hydroxy-1-Naphthoic Acid Obtained via a Slurry Screening Method. <i>Journal of Chemical Crystallography</i> , 2010, 40, 933-939.  | 1.1  | 31        |
| 43 | A Red Zwitterionic Co-Crystal of Acetaminophen and 2,4-Pyridinedicarboxylic Acid. <i>Journal of Pharmaceutical Sciences</i> , 2010, 99, 3676-3683.  | 3.3  | 29        |
| 44 | Crystal engineering rescues a solution organic synthesis in a cocrystallization that confirms the configuration of a molecular ladder. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 10974-10979. | 7.1  | 29        |
| 45 | Coding a coordination-driven self-assembly via a hydrogen bond-directed solid-state synthesis: An unexpected chiral tetrahedral capsule. <i>Chemical Communications</i> , 2007, , 1603-1604.  | 4.1  | 27        |
| 46 | The hydrazide/hydrazone click reaction as a biomolecule labeling strategy for M(CO) <sub>3</sub> (M = Re, <sup>99m</sup> Tc) radiopharmaceuticals. <i>Chemical Communications</i> , 2011, 47, 12846.  | 4.1  | 27        |
| 47 | Irreversible <i>endo</i> “Selective Diels–Alder Reactions of Substituted Alkoxyfurans: A General Synthesis of <i>endo</i> “Cantharimides. <i>Chemistry - A European Journal</i> , 2015, 21, 6107-6114.  | 3.3  | 27        |
| 48 | Silver-Free Palladium-Catalyzed C(sp <sup>3</sup> )–H Arylation of Saturated Bicyclic Amine Scaffolds. <i>Journal of Organic Chemistry</i> , 2018, 83, 2495-2503.   | 3.2  | 27        |
| 49 | Investigation of the Coordination Interactions of S-(Pyridin-2-ylmethyl)-Cysteine Ligands with M(CO) <sub>3</sub> (M = Re, <sup>99m</sup> Tc). <i>Inorganic Chemistry</i> , 2009, 48, 10625-10634.  | 4.0  | 25        |
| 50 | Doubly Encapsulated Perylene Diimides: Effect of Molecular Encapsulation on Photophysical Properties. <i>Journal of Organic Chemistry</i> , 2020, 85, 207-214.  | 3.2  | 25        |
| 51 | Mechanochemical reactivity inhibited, prohibited and reversed by liquid additives: examples from crystal-form screens. <i>Chemical Science</i> , 2021, 12, 3264-3269.   | 7.4  | 25        |
| 52 | Resorcinol-Templated Synthesis of a Cofacial Terpyridine in Crystalline π-Stacked Columns. <i>Organic Letters</i> , 2011, 13, 2260-2262.  | 4.6  | 24        |
| 53 | Rationalization of the Color Properties of Fluorescein in the Solid State: A Combined Computational and Experimental Study. <i>Chemistry - A European Journal</i> , 2016, 22, 10065-10073.  | 3.3  | 24        |
| 54 | Engineering Molecular Crystals: Backbreaking, yet Gratifying. <i>Crystal Growth and Design</i> , 2017, 17, 2913-2918.   | 3.0  | 24        |

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|----|--|-----|-----------|
| 55 | Dramatic Red-Shifted Fluorescence of [2.2]Paracyclophanes with Peripheral Substituents Attached to the Saturated Bridges. <i>Organic Letters</i> , 2009, 11, 5106-5109.  | 4.6 | 21        |
| 56 | A solid-state trimerisation of a diene diacid affords a bicyclobutyl: reactant structure from X-ray powder data and product separation and structure determination via co-crystallisation. <i>Chemical Communications</i> , 2011, 47, 236-238. | 4.1 | 21        |
| 57 | pH-Controlled Coordination Mode Rearrangements of "Clickable" Huisgen-Based Multidentate Ligands with $[M^{I/II}(CO)_3]^{+}$ (M = Re, $^{99m}Tc$ ). <i>Inorganic Chemistry</i> , 2013, 52, 2939-2950.  | 4.0 | 20        |
| 58 | Unusual reactivity of acetylacetone with imidazole/histamine complexes and (M=Re, $^{99m}Tc$ ). <i>Inorganica Chimica Acta</i> , 2011, 365, 356-362.   | 2.4 | 17        |
| 59 | Selective prebiotic synthesis of phosphoroaminonitriles and aminothioamides in neutral water. <i>Communications Chemistry</i> , 2019, 2, .   | 4.5 | 17        |
| 60 | Organosulfonates aid argentophilic forces in the crystal engineering of [2+2] photodimerisations: reactivity involving 3-pyridyl groups. <i>Supramolecular Chemistry</i> , 2014, 26, 207-213.  | 1.2 | 16        |
| 61 | Verschundene Polymorphe: eine Neubetrachtung. <i>Angewandte Chemie</i> , 2015, 127, 7076-7098.   | 2.0 | 15        |
| 62 | Crystallization at Solvent Interfaces Enables Access to a Variety of Cocrystal Polymorphs and Hydrates. <i>Crystal Growth and Design</i> , 2018, 18, 3263-3268.  | 3.0 | 15        |
| 63 | Sustainable Synthesis of Chiral Tetrahydrofurans through the Selective Dehydration of Pentoses. <i>Chemistry - A European Journal</i> , 2015, 21, 15947-15950.   | 3.3 | 14        |
| 64 | $ViO_4 \cdot C$ interactions in crystal structures of oxovanadium-coordination compounds. <i>New Journal of Chemistry</i> , 2013, 37, 619-623.   | 2.8 | 13        |
| 65 | Mechanochemical Formation and "Disappearance" of Caffeine "Citric-Acid Cocrystal Polymorphs. <i>Crystal Growth and Design</i> , 2020, 20, 1119-1129.   | 3.0 | 13        |
| 66 | Solid-state photoreactivity of 9-substituted acridizinium bromide salts. <i>CrystEngComm</i> , 2014, 16, 10830-10836.  | 2.6 | 12        |
| 67 | Synthesis of substituted benzoxaborinin-1-ols via palladium-catalysed cyclisation of alkenyl- and alkynyl-boronic acids. <i>Organic and Biomolecular Chemistry</i> , 2016, 14, 8039-8043.  | 2.8 | 11        |
| 68 | A lanthanide-based helicate coordination polymer derived from a rigid monodentate organic bridge synthesized in the solid state. <i>New Journal of Chemistry</i> , 2008, 32, 797.  | 2.8 | 10        |
| 69 | A metal-organic framework with three cavities based on three-coloured square tiling derived from a cyclobutane constructed in the solid state. <i>New Journal of Chemistry</i> , 2010, 34, 2400.   | 2.8 | 10        |
| 70 | Synthesis, structural analysis, electrochemical and magnetic properties of tetrachloroferrate ionic liquids. <i>New Journal of Chemistry</i> , 2021, 45, 13429-13440.  | 2.8 | 10        |
| 71 | Functionalised tetrahydrofuran fragments from carbohydrates or sugar beet pulp biomass. <i>Green Chemistry</i> , 2019, 21, 2035-2042.  | 9.0 | 9         |
| 72 | 1D and 2D metal-organic frameworks functionalized with free pyridyl groups. <i>Journal of Molecular Structure</i> , 2006, 796, 58-62.  | 3.6 | 7         |

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|----|--|-----|-----------|
| 73 | A bis(1-phenyl-1,3-butanedionato)nickel(II) adduct with 3-aminopyridine. Acta Crystallographica Section E: Structure Reports Online, 2003, 59, m985-m987.  | 0.2 | 6         |
| 74 | Opportunities in Nanotechnology via Organic Solid-State Reactivity: Nanostructured Co-Crystals and Molecular Capsules. , 0, , 305-315.   |     | 5         |
| 75 | Bis(dimethyl sulfoxide- $\hat{P}O$ )bis(1-phenylbutane-1,3-dionato- $\hat{P}2O,O\hat{a}^2$ )nickel(II). Acta Crystallographica Section E: Structure Reports Online, 2004, 60, m367-m369.                     | 0.2 | 4         |
| 76 | The first adduct of bis(1,3-diphenyl-1,3-propanedionato)oxovanadium(IV). Acta Crystallographica Section E: Structure Reports Online, 2004, 60, m1920-m1922.  | 0.2 | 4         |
| 77 | Applications of hydrogen-bond-acceptor templates to direct $\hat{a}$ in-phase $\hat{a}^TM$ reactivity of a diene diacid in the solid state. Photochemical and Photobiological Sciences, 2011, 10, 1384-1386. | 2.9 | 4         |
| 78 | Mechanistic In Situ and Ex Situ Studies of Phase Transformations in Molecular Co $\hat{a}$ Crystals. Chemistry - A European Journal, 2020, 26, 14645-14653.  | 3.3 | 4         |
| 79 | Sonochemical synthesis of nano-cocrystals. Proceedings of Meetings on Acoustics, 2013, , .   | 0.3 | 2         |
| 80 | Professor William Jones and His Materials Chemistry Group: Innovations and Advances in the Chemistry of Solids. Crystal Growth and Design, 2019, 19, 1479-1487.  | 3.0 | 2         |
| 81 | Crystal surface defects as possible origins of cocrystal dissociation. CrystEngComm, 2022, 24, 5031-5035.  | 2.6 | 2         |
| 82 | Bis(adamantylamine- $\hat{P}N$ )bis(1-phenylbutane-1,3-dionato- $\hat{P}2O,O\hat{a}^2$ )nickel(II). Acta Crystallographica Section E: Structure Reports Online, 2005, 61, m522-m524.                         | 0.2 | 1         |
| 83 | Self-assembly of bis(1,3-diphenylpropane-1,3-dionato- $\hat{P}2O,O\hat{a}^2$ )bis(thiomorpholine- $\hat{P}N$ )cobalt(II). Acta Crystallographica Section E: Structure Reports Online, 2006, 62, m283-m285.   | 0.2 | 1         |
| 84 | Quasi self-inclusion of a 1-D coordination polymer within a 2-D hydrogen-bonded grid: a chaperone effect. Journal of Coordination Chemistry, 2021, 74, 162-168.  | 2.2 | 1         |
| 85 | Inverted metal $\hat{a}$ organic frameworks: isorecticular decoration with organic anions using principles of supramolecular chemistry. Journal of Coordination Chemistry, 2021, 74, 169-177.                | 2.2 | 1         |
| 86 | Crystal and Molecular Structure of trans-1,2-bis(2-benzothiazolyl)ethene. Journal of Chemical Crystallography, 2007, 37, 713-715.  | 1.1 | 0         |