Citation List

Crystallization Applications
Recent Publications

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This list includes a selection of 70 recent publications, out of more than 5,000 publications that focused on crystallization studies and benefited from the use of Mettler-Toledo instruments

How to Measure Solubility and Metastable Zone

- Kavanagh, O., Hogan, F., Murphy, C., Croker, D., & Walker, G. (2020). Formulating a Stable Mannitol Infusion while Maintaining Hyperosmolarity. *Pharmaceutics, 12*(2), 187. https://doi.org/10.3390/pharmaceutics12020187
  #Pharmaceutical #FBRM #OptiMax

- Luo, M., Liu, C., Xue, J., Li, P., & Yu, J. (2017). Determination of metastable zone width of potassium sulfate in aqueous solution by ultrasonic sensor and FBRM. *Journal of Crystal Growth, 469*, 144–153. https://doi.org/10.1016/j.jcrysgro.2016.09.006
  #Chemical #FBRM

- Cui, C., Ren, H., Huang, Y., & Jiao, Q. (2017). Solubility Measurement and Correlation for ε-2,4,6,8,10,12-Hexanitro-2,4,6,8,10,12-hexaazaisowurtzitane in Five Organic Solvents at Temperatures between 283.15 and 333.15 K and Different Chloralkane + Ethyl Acetate Binary Solvents at Temperatures between 283.15 and 323.15 K. *Journal of Chemical & Engineering Data, 62*(4), 1204–1213. https://doi.org/10.1021/acs.jced.6b00664
  #Chemical #Explosive #FBRM

METTLER TOLEDO

- Xu, D., Xiong, X., Xu, D., Zhong, Y., Wang, X., Zhang, Z., & Yang, X. (2018). Experimental determination of solubility and metastable zone width of ammonium dihydrogen phosphate in $(NH_4)_2SO_4$ + water and NH_4F + water systems. *Fluid Phase Equilibria, 468*, 1–8. https://doi.org/10.1016/j.fluid.2018.04.008
  #Chemical #FBRM #PVM #LabMax

- Pascual, G. K., Donnellan, P., Glennon, B., Kamaraju, V. K., & Jones, R. C. (2017). Experimental and Modeling Studies on the Solubility of 2-Chloro-N-(4-methylphenyl)propanamide (S1) in Binary Ethyl Acetate + Hexane, Toluene + Hexane, Acetone + Hexane, and Butanone + Hexane Solvent Mixtures Using Polythermal Method. *Journal of Chemical & Engineering Data, 62*(10), 3193–3205. https://doi.org/10.1021/acs.jced.7b00288
  #Bio #Pharmaceutical #FBRM

- O'Grady, D., Barrett, M., Casey, E., & Glennon, B. (2007). The Effect of Mixing on the Metastable Zone Width and Nucleation Kinetics in the Anti-Solvent Crystallization of Benzoic Acid. *Chemical Engineering Research and Design*, *85*(7), 945–952. https://doi.org/10.1205/cherd06207
  #Chemical #FBRM #IR

- Barrett, P., & Glennon, B. (2002). Characterizing the Metastable Zone Width and Solubility Curve Using Lasentec FBRM and PVM. *Chemical Engineering Research and Design*, *80*(7), 799–805. https://doi.org/10.1205/026387602320776876
  #Academic #FBRM #PVM

- Kim, I., Ma, X., & Andreassen, J. P. (2012). Study of the Solid-liquid Solubility in the Piperazine-H2O-CO2 System using FBRM and PVM. *Energy Procedia*, *23*, 72–81. https://doi.org/10.1016/j.egypro.2012.06.056
  #Chemical #FBRM #PVM

- Sathe, D., Sawant, K., Mondkar, H., Naik, T., & Deshpande, M. (2010). Monitoring Temperature Effect on the Polymorphic Transformation of Acitretin Using FBRM–Lasentec. *Organic Process Research & Development*, *14*(6), 1373–1378. https://doi.org/10.1021/op100177s
  #Pharmaceutical #FBRM

Crystallization Design

- Smith, J. P., Obligacion, J. V., Dance, Z. E. X., Lomont, J. P., Ralbovsky, N. M., Bu, X., & Mann, B. F. (2021). Investigation of Lithium Acetyl Phosphate Synthesis Using Process Analytical Technology. *Organic Process Research & Development, 25*(6), 1402–1413. https://doi.org/10.1021/acs.oprd.1c00091
  #Pharmaceutical #OptiMax #pH #FBRM #PVM

- Soto, R., Verma, V., Lynch, A., Hodnett, B. K., & Rasmuson, K. C. (2020). Crystal Growth Kinetics of Pharmaceutical Compounds. *Crystal Growth & Design, 20*(12), 7626–7639. https://doi.org/10.1021/acs.cgd.0c00668
  #Academic #Pharmaceutical #FBRM #IR

- Trampuž, M., Teslić, D., & Likozar, B. (2019). Crystallization of fesoterodine fumarate active pharmaceutical ingredient: Modelling of thermodynamic equilibrium, nucleation, growth, agglomeration and dissolution kinetics and temperature cycling. *Chemical Engineering Science, 201*, 97–111. https://doi.org/10.1016/j.ces.2019.02.019
  #Academic #Pharmaceutical #FBRM #IR

- Zhang, D., Liu, L., Xu, S., Du, S., Dong, W., & Gong, J. (2018). Optimization of cooling strategy and seeding by FBRM analysis of batch crystallization. *Journal of Crystal Growth, 486*, 1–9. https://doi.org/10.1016/j.jcrysgro.2017.12.046
  #Academic #FBRM

- Kutluay, S., ŞAhin, M., Ceyhan, A. A., & İZgi, M. S. (2017). Design and optimization of production parameters for boric acid crystals with the crystallization process in an MSMPR crystallizer using FBRM® and PVM® technologies. *Journal of Crystal Growth, 467*, 172–180. https://doi.org/10.1016/j.jcrysgro.2017.03.027
  #Academic #FBRM #PVM

- Kim, S., Lotz, B., Lindrud, M., Girard, K., Moore, T., Nagarajan, K., Alvarez, M., Lee, T., Nikfar, F., Davidovich, M., Srivastava, S., & Kiang, S. (2005). Control of the Particle Properties of a Drug Substance by Crystallization Engineering and the Effect on Drug Product Formulation. *Organic Process Research & Development, 9*(6), 894–901. https://doi.org/10.1021/op050091q
  #Pharmaceutical #FBRM

- Desikan, S., Parsons, R. L., Davis, W. P., Ward, J. E., Marshall, W. J., & Toma, P. H. (2005). Process Development Challenges to Accommodate A Late-Appearing Stable Polymorph: A Case Study on the Polymorphism and Crystallization of a Fast-Track Drug Development Compound. *Organic Process Research & Development, 9*(6), 933–942. https://doi.org/10.1021/op0501287
  #Pharmaceutical #PVM

- Saleemi, A. N., Steele, G., Pedge, N. I., Freeman, A., & Nagy, Z. K. (2012). Enhancing crystalline properties of a cardiovascular active pharmaceutical ingredient using a process analytical technology based crystallization feedback control strategy. *International Journal of Pharmaceutics, 430*(1–2), 56–64. https://doi.org/10.1016/j.ijpharm.2012.03.029
  #Pharmaceutical #FBRM #PVM

- Griffin, D. J., Grover, M. A., Kawajiri, Y., & Rousseau, R. W. (2015). Mass–count plots for crystal size control. *Chemical Engineering Science, 137*, 338–351. https://doi.org/10.1016/j.ces.2015.06.048
  #Academic #OptiMax #FBRM #IR

Seeding Crystallization Processes

- Sirota, E., Kwok, T., Varsolona, R. J., Whittaker, A., Andreani, T., Quirie, S., Margelefsky, E., & Lamberto, D. J. (2021). Crystallization Process Development for the Final Step of the Biocatalytic Synthesis of Islatravir: Comprehensive Crystal Engineering for a Low-Dose Drug. *Organic Process Research & Development, 25*(2), 308–317. https://doi.org/10.1021/acs.oprd.0c00520
  #Pharmaceutical #OptiMax #EasyViewer #FBRM #IR

- Meng, W., Sirota, E., Feng, H., McMullen, J. P., Codan, L., & Cote, A. S. (2020). Effective Control of Crystal Size via an Integrated Crystallization, Wet Milling, and Annealing Recirculation System. *Organic Process Research & Development, 24*(11), 2639–2650. https://doi.org/10.1021/acs.oprd.0c00307
  #Pharmaceutical #OptiMax #FBRM #IR

- Eren, A., Szilagyi, B., Quon, J. L., Papageorgiou, C. D., & Nagy, Z. K. (2021). Experimental Investigation of an Integrated Crystallization and Wet-Milling System with Temperature Cycling to Control the Size and Aspect Ratio of Needle-Shaped Pharmaceutical Crystals. *Crystal Growth & Design*, *21*(7), 3981–3993. https://doi.org/10.1021/acs.cgd.1c00308
  #Academic #Pharmaceutical #FBRM #PVM

- Yu, Z. Q., Chow, P. S., Tan, R. B. H., & Ang, W. H. (2013). PAT-Enabled Determination of Design Space for Seeded Cooling Crystallization. *Organic Process Research & Development*, *17*(3), 549–556. https://doi.org/10.1021/op300319t
  #Academic #FBRM #IR

- Deneau, E., & Steele, G. (2005). An In-Line Study of Oiling Out and Crystallization. *Organic Process Research & Development*, *9*(6), 943–950. https://doi.org/10.1021/op050107c
  #Academic #Pharmaceutical #FBRM

- Aamir, E., Nagy, Z., & Rielly, C. (2010). Optimal seed recipe design for crystal size distribution control for batch cooling crystallisation processes. *Chemical Engineering Science*, *65*(11), 3602–3614. https://doi.org/10.1016/j.ces.2010.02.051
  #Academic #FBRM

- Bakar, M. R. A., Nagy, Z. K., & Rielly, C. D. (2009). Seeded Batch Cooling Crystallization with Temperature Cycling for the Control of Size Uniformity and Polymorphic Purity of Sulfathiazole Crystals. *Organic Process Research & Development*, *13*(6), 1343–1356. https://doi.org/10.1021/op900174b
  #Academic #FBRM

Optimizing Crystal Shape

- Kutluay, S., Ceyhan, A. A., ŞAhin, M., & İZgi, M. S. (2020). Utilization of In Situ FBRM and PVM Probes to Analyze the Influences of Monopropylene Glycol and Oleic Acid as Novel Additives on the Properties of Boric Acid Crystals. *Industrial & Engineering Chemistry Research*, *59*(19), 9198–9206. https://doi.org/10.1021/acs.iecr.0c00551
  #Academic #FBRM #PVM

- Li, X., Xu, D., Yang, J., Yan, Z., Luo, T., Li, X., Zhang, Z., & Wang, X. (2021). Utilization of FBRM and PVM to analyze the effects of different additives on the crystallization of ammonium dihydrogen phosphate. *Journal of Crystal Growth*, *576*, 126378. https://doi.org/10.1016/j.jcrysgro.2021.126378
  #Academic #FBRM #PVM

- Jiang, M., Zhu, X., Molaro, M. C., Rasche, M. L., Zhang, H., Chadwick, K., Raimondo, D. M., Kim, K. K. K., Zhou, L., Zhu, Z., Wong, M. H., O'Grady, D., Hebrault, D., Tedesco, J., & Braatz, R. D. (2014). Modification of Crystal Shape through Deep Temperature Cycling. *Industrial & Engineering Chemistry Research*, *53*(13), 5325–5336. https://doi.org/10.1021/ie400859d
  #Academic #FBRM #PVM

- Leyssens, T., Baudry, C., & Escudero Hernandez, M. L. (2011). Optimization of a Crystallization by Online FBRM Analysis of Needle-Shaped Crystals. *Organic Process Research & Development*, *15*(2), 413–426. https://doi.org/10.1021/op100314g
  #Academic #FBRM

- Dufour, F., Stichel, B., & Grayson, J. I. (2013). Control of Crystal Modification and Crystal Shape by Control of Solid–Solid Transitions during Crystallization and Drying: Two Industrial Case Studies. *Organic Process Research & Development, 17*(3), 568–577. https://doi.org/10.1021/op300333h
  #Academic #DSC

- Peña, R., & Nagy, Z. K. (2015). Process Intensification through Continuous Spherical Crystallization Using a Two-Stage Mixed Suspension Mixed Product Removal (MSMPR) System. *Crystal Growth & Design, 15*(9), 4225–4236. https://doi.org/10.1021/acs.cgd.5b00479
  #Academic #Pharmaceutical #FBRM

Monitoring Supersaturation

- Yang, H., Kim, J., & Kim, K. (2019). Study on the Crystallization Rates of β- and ϵ-form HNIW in in-situ Raman Spectroscopy and FBRM. *Propellants, Explosives, Pyrotechnics, 45*(3), 422–430. https://doi.org/10.1002/prep.201900194
  #Academic #FBRM

- Zhang, T., Liu, Y., Du, S., Wu, S., Han, D., Liu, S., & Gong, J. (2017). Polymorph Control by Investigating the Effects of Solvent and Supersaturation on Clopidogrel Hydrogen Sulfate in Reactive Crystallization. *Crystal Growth & Design, 17*(11), 6123–6131. https://doi.org/10.1021/acs.cgd.7b01311
  #Academic #EasyMax #FBRM

- Liotta, V., & Sabesan, V. (2004). Monitoring and Feedback Control of Supersaturation Using ATR-FTIR to Produce an Active Pharmaceutical Ingredient of a Desired Crystal Size. *Organic Process Research & Development, 8*(3), 488–494. https://doi.org/10.1021/op049959n
  #Pharmaceutical #FBRM #IR

- Duffy, D., Barrett, M., & Glennon, B. (2013). Novel, Calibration-Free Strategies for Supersaturation Control in Antisolvent Crystallization Processes. *Crystal Growth & Design, 13*(8), 3321–3332. https://doi.org/10.1021/cg301673g
  #Academic #Pharmaceutical #FBRM #EasyMax #IR

- Zhou, G., Moment, A., Yaung, S., Cote, A., & Hu, T. E. (2013). Evolution and Application of an Automated Platform for the Development of Crystallization Processes. *Organic Process Research & Development, 17*(10), 1320–1329. https://doi.org/10.1021/op400187h
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- Barrett, M., McNamara, M., Hao, H., Barrett, P., & Glennon, B. (2010). Supersaturation tracking for the development, optimization and control of crystallization processes. *Chemical Engineering Research and Design, 88*(8), 1108–1119. https://doi.org/10.1016/j.cherd.2010.02.010
  #Academic #Pharmaceutical #EasyMax #LabMax #FBRM #PVM #IR

Polymorphic Crystallization

- Soto, R., Verma, V., & Rasmuson, C. (2020). Crystal Growth Kinetics of a Metastable Polymorph of Tolbutamide in Organic Solvents. *Crystal Growth & Design, 20*(3), 1985–1996. https://doi.org/10.1021/acs.cgd.9b01637
  #Academic #Pharmaceutical #OptiMax #FBRM #IR

- Yao, X., Wu, Y., Sun, S., Ren, F., Yang, S., & Liu, Y. (2020). The Transformation Relationship between Two Hydrates of Calcium Dobesilate and its Application in Crystallization Process. *Crystal Research & Technology*, *55*(12). https://doi.org/10.1002/crat.202000139
  #Academic #Pharmaceutical #EasyViewer #EasyMax #Raman #FBRM

- Du, D., Ren, G. B., Qi, M. H., Li, Z., & Xu, X. Y. (2019). Solvent-Mediated Polymorphic Transformation of Famoxadone from Form II to Form I in Several Mixed Solvent Systems. *Crystals, 9*(3), 161. https://doi.org/10.3390/cryst9030161
  #Academic #Pharmaceutical #EasyMax #IR #FBRM

- Li, L., Zhao, S., Xin, Z., & Zhou, S. (2020). Nucleation kinetics of clopidogrel hydrogen sulfate polymorphs in reactive crystallization: Induction period and interfacial tension measurements. *Journal of Crystal Growth, 538*, 125610. https://doi.org/10.1016/j.jcrysgro.2020.125610
  #Academic #Chemical #EasyMax #FBRM

- Larpent, P., Iuzzolino, L., Schoell, J., Codan, L., Tan, M., Newman, J. A., & Lee, A. Y. (2021). Bullet-Proofing Doravirine (MK-1439) Starting Material Supply: Rapid Identification and Response to a New Polymorph of Ethyl Ester. *Crystal Growth & Design, 21*(7), 4207–4219. https://doi.org/10.1021/acs.cgd.1c00469
  #Pharmaceutical #FBRM #IR #Balance

- Hao, H., Barrett, M., Hu, Y., Su, W., Ferguson, S., Wood, B., & Glennon, B. (2011). The Use of in Situ Tools to Monitor the Enantiotropic Transformation of p-Aminobenzoic Acid Polymorphs. *Organic Process Research & Development*, *16*(1), 35–41. https://doi.org/10.1021/op200141z
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- O'Sullivan, B., & Glennon, B. (2005). Application of in Situ FBRM and ATR-FTIR to the Monitoring of the Polymorphic Transformation of d-Mannitol. *Organic Process Research & Development*, *9*(6), 884–889. https://doi.org/10.1021/op0500887
  #Academic #FBRM #IR #PVM

- Liu, W., Wei, H., Zhao, J., Black, S., & Sun, C. (2013). Investigation into the Cooling Crystallization and Transformations of Carbamazepine Using in Situ FBRM and PVM. *Organic Process Research & Development*, *17*(11), 1406–1412. https://doi.org/10.1021/op400066u
  #Academic #Pharmaceutical #FBRM #PVM

Phase Separation (Oiling Out)

- Zhao, X., Webb, N. J., Muehlfeld, M. P., Stottlemyer, A. L., & Russell, M. W. (2021). Application of a Semiautomated Crystallizer to Study Oiling-Out and Agglomeration Events—A Case Study in Industrial Crystallization Optimization. *Organic Process Research & Development*, *25*(3), 564–575. https://doi.org/10.1021/acs.oprd.0c00494
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- Tanaka, K., & Takiyama, H. (2019). Effect of Oiling-Out during Crystallization on Purification of an Intermediate Compound. *Organic Process Research & Development, 23*(9), 2001–2008. https://doi.org/10.1021/acs.oprd.9b00256
  #Pharmaceutical #FBRM #PVM

- Duffy, D., Cremin, N., Napier, M., Robinson, S., Barrett, M., Hao, H., & Glennon, B. (2012). In situ monitoring, control and optimization of a liquid–liquid phase separation crystallization. *Chemical Engineering Science*, *77*, 112–121. https://doi.org/10.1016/j.ces.2012.01.047
  #Academic #Pharmaceutical #FBRM #PVM

- Ren, R., Sun, D., Wei, T., Zhang, S., & Gong, J. (2014). The Role of Diastereomer Impurity in Oiling-Out during the Resolution of trans-4-Methyl-2-piperidine Carboxylic Ethyl Ester Enantiomers by Crystallization. *Organic Process Research & Development*, *18*(6), 709–716. https://doi.org/10.1021/op500026z
  #Academic #Chemical #FBRM #IR

- Lafferrère, L., Hoff, C., & Veesler, S. (2004). In Situ Monitoring of the Impact of Liquid−Liquid Phase Separation on Drug Crystallization by Seeding. *Crystal Growth & Design*, *4*(6), 1175–1180. https://doi.org/10.1021/cg0497750
  #Academic #FBRM

- Zhao, H., Xie, C., Xu, Z., Wang, Y., Bian, L., Chen, Z., & Hao, H. (2012). Solution Crystallization of Vanillin in the Presence of a Liquid–Liquid Phase Separation. *Industrial & Engineering Chemistry Research*, *51*(45), 14646–14652. https://doi.org/10.1021/ie302360u
  #Academic #FBRM #PVM #IR

Managing Impurities

- Salami, H., McDonald, M. A., Bommarius, A. S., Rousseau, R. W., & Grover, M. A. (2021). In Situ Imaging Combined with Deep Learning for Crystallization Process Monitoring: Application to Cephalexin Production. *Organic Process Research & Development*, *25*(7), 1670–1679. https://doi.org/10.1021/acs.oprd.1c00136
  #Academic #Pharmaceutical #EasyViewer #DosingUnit

- McTague, H., & Rasmuson, K. C. (2021). Nucleation in the Theophylline/Glutaric Acid Cocrystal System. *Crystal Growth & Design*, *21*(7), 3967–3980. https://doi.org/10.1021/acs.cgd.1c00296
  #Pharmaceutical #Academic #OptiMax #Raman #FBRM #IR

- Ferguson, S., Ortner, F., Quon, J., Peeva, L., Livingston, A., Trout, B. L., & Myerson, A. S. (2013). Use of Continuous MSMPR Crystallization with Integrated Nanofiltration Membrane Recycle for Enhanced Yield and Purity in API Crystallization. *Crystal Growth & Design*, *14*(2), 617–627. https://doi.org/10.1021/cg401491y
  #Pharmaceutical #Academic #FBRM

- Czapla, F., Polenske, D., Klukas, L., Lorenz, H., & Seidel-Morgenstern, A. (2010). Cyclic auto-seeded polythermal preferential crystallization—Effect of impurity accumulation. *Chemical Engineering and Processing: Process Intensification*, *49*(1), 22–28. https://doi.org/10.1016/j.cep.2009.10.016
  #Academic #FBRM #PVM #Densitometer

- Scott, C., & Black, S. (2005). In-Line Analysis of Impurity Effects on Crystallisation. *Organic Process Research & Development*, *9*(6), 890–893. https://doi.org/10.1021/op050081p
  #Pharmaceutical #FBRM

- Markande, A., Nezzal, A., Fitzpatrick, J., Aerts, L., & Redl, A. (2012). Influence of impurities on the crystallization of dextrose monohydrate. *Journal of Crystal Growth*, *353*(1), 145–151. https://doi.org/10.1016/j.jcrysgro.2012.04.021
  #Pharmaceutical #Academic #FBRM

Crystallization Scale-Up

- Bhamidi, V., Dumoleijn, K., Guha, D., Kirk, S. K., de Bruyn, A., & Pymer, A. K. (2019). From Experiments and Models to Business Decisions: A Scale-up Study on the Reactive Crystallization of a Crop Protection Agent. *Organic Process Research & Development*, *23*(3), 342–354. https://doi.org/10.1021/acs.oprd.8b00384
  #Agrichemical #FBRM #PVM

- Maloney, M. T., Jones, B. P., Olivier, M. A., Magano, J., Wang, K., Ide, N. D., Palm, A. S., Bill, D. R., Leeman, K. R., Sutherland, K., Draper, J., Daly, A. M., Keane, J., Lynch, D., O'Brien, M., & Tuohy, J. (2016). Palbociclib Commercial Manufacturing Process Development. Part II: Regioselective Heck Coupling with Polymorph Control for Processability. *Organic Process Research & Development*, *20*(7), 1203–1216. https://doi.org/10.1021/acs.oprd.6b00069
  #Pharmaceutical #OxygenProbe #FBRM #IR

- Barrett, M., O'Grady, D., Casey, E., & Glennon, B. (2011). The role of meso-mixing in anti-solvent crystallization processes. *Chemical Engineering Science*, *66*(12), 2523–2534. https://doi.org/10.1016/j.ces.2011.02.042
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- Mousaw, P., Saranteas, K., & Prytko, B. (2008). Crystallization Improvements of a Diastereomeric Kinetic Resolution through Understanding of Secondary Nucleation. *Organic Process Research & Development*, *12*(2), 243–248. https://doi.org/10.1021/op700276w
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- Cote, A., Zhou, G., & Stanik, M. (2009). A Novel Crystallization Methodology to Ensure Isolation of the Most Stable Crystal Form. *Organic Process Research & Development*, *13*(6), 1276–1283. https://doi.org/10.1021/op900095n
  #Pharmaceutical #FBRM #IR

Continuous Crystallization

- Bosits, M. H., Szalay, Z., Pataki, H., Marosi, G., & Demeter, D. (2021). Development of a Continuous Crystallization Process of the Spironolactone Hydrate Form with a Turbidity-Based Level Control Method. *Organic Process Research & Development, 25*(4), 760–768. https://doi.org/10.1021/acs.oprd.0c00409
  #Academic #Pharmaceutical #EasyMax #DosingUnit #Turbidimeter #FBRM

- Tanaka, M., Hosoya, M., Manaka, A., & Tsuno, N. (2021). Synthesis of a dipeptide by integrating a continuous flow reaction and continuous crystallization. *Chemical Engineering Research and Design, 175*, 259–271. https://doi.org/10.1016/j.cherd.2021.09.013
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- Roche, P., Jones, R. C., Glennon, B., & Donnellan, P. (2021). Development of a continuous evaporation system for an API solution stream prior to crystallization. *AIChE Journal*, *67*(11). https://doi.org/10.1002/aic.17377
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- Yang, Y., Song, L., Gao, T., & Nagy, Z. K. (2015). Integrated Upstream and Downstream Application of Wet Milling with Continuous Mixed Suspension Mixed Product Removal Crystallization. *Crystal Growth & Design*, *15*(12), 5879–5885. https://doi.org/10.1021/acs.cgd.5b01290
  #Academic #FBRM

- Ferguson, S., Morris, G., Hao, H., Barrett, M., & Glennon, B. (2013). Characterization of the anti-solvent batch, plug flow and MSMPR crystallization of benzoic acid. *Chemical Engineering Science*, *104*, 44–54. https://doi.org/10.1016/j.ces.2013.09.006
  #Academic #OptiMax #EasyMax #IR #FBRM

- Polster, C. S., Cole, K. P., Burcham, C. L., Campbell, B. M., Frederick, A. L., Hansen, M. M., Harding, M., Heller, M. R., Miller, M. T., Phillips, J. L., Pollock, P. M., & Zaborenko, N. (2014). Pilot-Scale Continuous Production of LY2886721: Amide Formation and Reactive Crystallization. *Organic Process Research & Development*, *18*(11), 1295–1309. https://doi.org/10.1021/op500204z
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- Ferguson, S., Morris, G., Hao, H., Barrett, M., & Glennon, B. (2012). In-situ monitoring and characterization of plug flow crystallizers. *Chemical Engineering Science*, *77*, 105–111. https://doi.org/10.1016/j.ces.2012.02.013
  #Academic #IR #FBRM #PVM

- Kougoulos, E., Jones, A., & Wood-Kaczmar, M. (2005). Modelling particle disruption of an organic fine chemical compound using Lasentec focussed beam reflectance monitoring (FBRM) in agitated suspensions. *Powder Technology*, *155*(2), 153–158. https://doi.org/10.1016/j.powtec.2005.05.033
  #Chemical #Academic #FBRM

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