

PUBLICATIONS

CHAPTER IN BOOKS.

1. **Sameer V. Dalvi**, 2015, Mass Transfer, in “Engineering Heat and Mass Transfer”, 2nd Edition, Penram International Publishing, Mumbai, IN. (ISBN: 9788187972945).

PAPERS IN INTERNATIONAL PEER-REVIEWED JOURNALS:

1. Indumathi Sathisaran and **Sameer V. Dalvi**, CocrySTALLIZATION of carbamazepine with amides: CocrySTal and eutectic phases with improved dissolution, Accepted Manuscript, Journal of Molecular Structure, 2019 (published online 17 May 2019)
2. Arul Mozhi Devan Padmanathan, Apoorva Sneha Ravi, Hema Choudhary, Subramanyan Namboodiri Varanakkottu, **Sameer Vishvanath Dalvi**, “Predictive Framework for the Spreading of Liquid Drops and the Formation of Liquid Marbles on Hydrophobic Particle Bed”, Articles ASAP, Langmuir, 2019 (published online 30 April 2019)
3. Awaneesh Upadhyay and **Sameer Vishvanath Dalvi**, Microbubble Formulations: Synthesis, Stability, Modeling and Biomedical Applications, Ultrasound in Medicine and Biology, Available Online December 5, 2018
4. Komal Upendra Pandey and **Sameer Vishvanath Dalvi**, Understanding Stability Relationships among Three Curcumin Polymorphs, Advanced Powder Technology, Available Online November 12, 2018
5. Awaneesh Upadhyay, Bhrrugu Yagnik, Priti Desai, and **Sameer V. Dalvi**, Microbubble-Mediated Enhanced Delivery of Curcumin to Cervical Cancer Cells, ACS Omega, 2018, 3 (10), pp 12824–12831
6. Indumathi Sathisaran, Jenna Marie Skieneh, Sohrab Rohani and **Sameer Vishvanath Dalvi**, "Curcumin Eutectics with Enhanced Dissolution Rates: Binary Phase Diagrams, Characterization and Dissolution Studies", Articles ASAP, Journal of Chemical and Engineering Data
7. Indumathi S. and **Sameer V. Dalvi**, “Engineering CocrySTals of Poorly Water Soluble Drugs to Enhance Dissolution in Aqueous Medium”, Pharmaceutics, 2018, 10(3), 108 [In Special Issue of *Pharmaceutics* on "Dissolution Enhancement of Poorly Soluble Drugs"]
8. Jenna Marie Skieneh, Indumathi Sathisaran, **Sameer V. Dalvi**, and Sohrab Rohani, “Co-amorphous Form of Curcumin–Folic Acid Dihydrate with Increased Dissolution Rate” , Crystal Growth & Design, 2017, 17 (12), pp 6273–6280 (**Impact Factor: 4.055**)
9. Indumathi S. and **Sameer V. Dalvi**, “Crystal Engineering of Curcumin with Salicylic Acid and Hydroxyquinol as Coformers”, Crystal Growth & Design, 2017, 17 (7), pp 3974–3988 (**Impact Factor: 4.055**)
10. Komal Pandey, Amruta B. Chatte and **Sameer V. Dalvi**, “Continuous Production of Aqueous Suspensions of Ultra-fine Particles of Curcumin using Ultrasonically Driven Mixing Device”, Accepted

for Publication in Pharmaceutical Development and Technology, Available online from April 24, 2017
(Impact Factor: 1.860)

11. Rupanjali Prasad, Rahul Patsariya, **Sameer V. Dalvi**, "Precipitation of curcumin by pressure reduction of CO₂-expanded acetone", Powder Technology, 310 (2017) 143–153 **(Impact Factor: 2.942)**
12. Awaneesh Upadhyay, **Sameer V. Dalvi**, Gaurav Gupta and Nitin Khanna, "Effect of PEGylation on Performance of Protein Microbubbles and its Comparison with Lipid Microbubbles", Material Science and Engineering C, 71 (2017), 425-430 **(Impact Factor: 4.164)**
13. Awaneesh Upadhyay, and **Sameer V. Dalvi**, "Synthesis, characterization and stability of BSA-encapsulated microbubbles", RSC Advances, 6 (2016), 15016 - 15026 **(Impact Factor: 3.108)**
14. Alpana Thorat and **Sameer V. Dalvi**, "Ultrasound-assisted Modulation of Concomitant Polymorphism of Curcumin during Liquid Antisolvent Precipitation, Ultrasonics Sonochemistry 30 (2016), pp. 35-43 **(Impact Factor: 4.218, Citations: 2)**
15. Sudiksha Sridhar, Ayushi Patel, **Sameer V. Dalvi**, "Estimation of Storage Stability of Microbubble Suspensions", Colloids and Surfaces A: Physicochemical and Engineering Aspects 489 (2016) pp. 182-190 **(Impact Factor: 2.714, Citation: 1)**
16. Alpana A. Thorat and **Sameer V. Dalvi**, "Solid-State Phase Transformations and Storage Stability of Curcumin Polymorphs", Crystal Growth and Design, 2015, 15 (4), 1757-1770. **(Impact Factor: 4.055, Citations: 10)**
17. **Sameer V. Dalvi** and Jignesh Joshi, "Modeling of Microbubble Dissolution in Aqueous Medium", Journal of Colloid and Interface Science, 437, (2015), pp. 259-269. **(Impact Factor: 4.233, Citations: 8)**
18. **Sameer V. Dalvi** and Manishkumar D. Yadav, "Effect of Ultrasound and Stabilizers on Nucleation Kinetics of Curcumin during Liquid Antisolvent Precipitation", Ultrasonics Sonochemistry, 24 (2015), pp 114-122. **(Impact Factor:4.218, Citations : 4)**
19. Alpana A. Thorat and **Sameer V. Dalvi**, "Particle Formation Pathways and Polymorphism of Curcumin Induced by Ultrasound and Additives During Liquid Antisolvent Precipitation", CrystEngComm, 2014, 16 (48), 11102 – 11114. **(6th among top 20 most accessed articles published in CrystEngComm in the year 2014) (Impact Factor: 3.474, Citations : 12)**
20. Alpana Thorat, Manish D. Yadav and **Sameer V. Dalvi**, "Simple Criterion for Stability of Aqueous Suspensions of Ultra-fine Particles of a Poorly Water Soluble Drug", Langmuir, 30 (16), 2014, 4576–4592. **(Impact Factor: 3.833, Citations: 6)**
21. K Arjun Kumar, Rajarshi Chattaraj, Umesh Dhumal, Mamata Mukhopadhyay, Madhu Vinjamur and **Sameer V. Dalvi**, "Modeling of Precipitation of Ultra-fine Particles by Pressure Reduction over CO₂-Expanded Liquids", The Journal of Supercritical Fluids, 79, 2013, 227-235. **(Impact Factor: 2.991, Citations: 3)**

22. **Sameer V. Dalvi**, Mohammad A. Azad, Rajesh Dave, "Precipitation and Stabilization of Ultrafine Particles of Fenofibrate in Aqueous Suspensions by RESOLV", Powder Technology, 236, 2012, 75-84. **(Impact Factor: 2.942, Citations: 14)**
23. Alpana Thorat and **Sameer V Dalvi**, "Liquid Antisolvent Precipitation and Stabilization of Nanoparticles of Poorly Water Soluble Drugs in Aqueous Suspensions: Recent Developments and Future Perspective", Chemical Engineering Journal, 181-182, 2012, 1-34. **(Top 25 most downloaded articles from Chemical Engineering Journal for almost 2 years from the date of publication) (Impact Factor: 6.216, Citations: 119)**
24. Wusheng Zhu, Francis S. Romanski, **Sameer V. Dalvi**, Rajesh N. Dave, M. Silvina Tomassone, "Atomistic Simulations of Aqueous Griseofulvin Crystals in the Presence of Individual and Multiple Additives" Chemical Engineering Science, 73, 2012, 218–230. **(Impact Factor: 2.895, Citations: 12)**
25. **Sameer V. Dalvi** and Rajesh N. Dave, "Analysis of Nucleation Kinetics for Precipitation of Poorly Water Soluble Drugs in Presence of Ultrasound and Hydroxypropyl Methyl Cellulose During Antisolvent Precipitation" , International Journal of Pharmaceutics, 387 (1-2), 2010, 172-179. **(Impact Factor: 3.649, Citations: 52)**
26. Christian Beck, **Sameer V. Dalvi** and Rajesh Dave, "Controlled Liquid Antisolvent Precipitation of Drug Particles using Rapid Mixing Device", Chemical Engineering Science, 65, (21, 1), 2010, Pages 5669-5675. **(Impact Factor: 2.895, Citations: 33)**
27. **Sameer V. Dalvi** and Rajesh N. Dave, "Controlling Particle Size of Poorly Water Soluble Drug using Ultrasound and Stabilizers in Antisolvent Precipitation", Ind. Eng. Chem. Res. 48 (16), 2009, page 7581-7593. **(Impact Factor: 2.843, Citations: 87)**
28. **Sameer V. Dalvi** and Mamata Mukhopadhyay, "Use of Subcritical CO₂ for Precipitation of Ultra-fine Particles by Pressure Reduction of Gas-Expanded Organic Liquids" Ind. Eng. Chem. Res. 48, 2009, page 5696-5707. **(Impact Factor: 2.843, Citations: 11)**
29. **Sameer V. Dalvi** and Mamata Mukhopadhyay, "A Novel Process for Precipitation of Ultra-fine Particles using Sub-critical CO₂" Powder Technology 195, 2009, page 190-195. **(Impact Factor: 2.942, Citations: 14)**
30. **Sameer V. Dalvi** and Mamata Mukhopadhyay, "A New Generalized Method for the Predictions of Liquid Molar Volumes of CO₂-expanded Solvents", Ind. Eng. Chem. Res. 46, 2007, page 8282-8287. **(Impact Factor: 2.843, Citations: 5)**
31. **Sameer V. Dalvi** and Mamata Mukhopadhyay, "Large and Rapid Temperature Reduction of Organic Solutions with Subcritical CO₂", AIChEJ, 53 (11), 2007, page 2814-2823. **(Impact Factor: 2.836, Citations: 13)**
32. **Sameer V. Dalvi** and M.Mukhopadhyay, "Parameters Controlling Supersaturation by DELOS Using Carbon Dioxide" Journal of Chemical and Biotechnology, 80(4), 2005, page 1267-1270. **(Impact Factor: 3.135, Citations: 3)**

33. Mamata Mukhopadhyay and **Sameer V. Dalvi**, "New Prediction Method for Ternary Solid-Liquid-Vapor Equilibrium from Binary Data", *Journal of Chemical Engg. Data*, 50, issue 4, 2005, page 1283-1289. **(Impact Factor: 2.323, Citation: 3)**
34. Mamata Mukhopadhyay and **Sameer V. Dalvi**, "Analysis of supersaturation and nucleation in a solution droplet in SC CO₂ environment", *Journal of Chemical and Biotechnology*, 80,2005, page 445-454. **(Impact Factor: 3.135, Citations: 8)**
35. M.Mukhopadhyay and **Sameer V. Dalvi**, Mass and heat transfer analysis of SAS: effects of thermodynamic states and flow rates on droplet size", *The Journal of Supercritical Fluids*, 30, 2004, page 333-348. **(Impact Factor: 2.991, Citations: 43)**
36. M.Mukhopadhyay and **Sameer V. Dalvi**, "Partial Molar Volume Fraction of Solvent in Binary (CO₂-Solvent) Solution for Solid Solubility Predictions", *The Journal of Supercritical Fluids*, 29, 2004, pages 221-230. **(Impact Factor: 2.991, Citations: 34)**

CONFERENCE PROCEEDINGS/TALKS/POSTER PRESENTATIONS

1. **Sameer V. Dalvi**, " Engineering Stable and Biocompatible Microbubbles for Biomedical Applications", *7th Interdisciplinary Symposium on Materials Chemistry*, organized by Society for Materials Chemistry, India held at BARC, Anushaktinagar, Mumbai during December 4-8, 2018.
2. Prasad, **Rupanjali** and **Dalvi, Sameer V.**, "Understanding evolution Of hierarchical structures of a poorly water soluble drug using additives during liquid antisolvent precipitation", in *the 13th International Workshop on the Crystal Growth of Organic Material (CGOM13)*, Korea University, Seoul, KR, Aug. 27-30, 2018.
3. Pandey, Komal and **Dalvi, Sameer V.**, "Understanding the interactions of additives and stabilization of fenofibrate particles in aqueous suspensions", in the *4th Asian Crystallization Technology Symposium (ACTS 2018)*, Biopolis, SG, Jun. 20-22, 2018.
4. Sathisaran, Indumathi and **Dalvi, Sameer V.**, "Enhancing aqueous solubility of carbamazepine by crystal engineering approach", in the *4th Asian Crystallization Technology Symposium (ACTS 2018)*, Biopolis, SG, Jun. 20-22, 2018.
5. **Sathisaran, Indumathi**; Skieneh, Jenna Marie; **Dalvi, Sameer V.** and Rohani, Sohrab, "Exploring co-crystallization of curcumin in *the Pharmaceutical Powder X-ray Diffraction Symposium-15 (A satellite meeting to the 24th Congress & General Assembly of the International Union of Crystallography - IUCr 2017)*, Hyderabad, IN, Aug. 18-20, 2017
6. **Sathisaran, Indumathi** and **Dalvi, Sameer V.**, "Understanding rationale behind carbamazepine cocrystallization with acids, amides and hydrazides", in *the Pharmaceutical Powder X-ray Diffraction Symposium-15 (A satellite meeting to the 24th Congress & General Assembly of the International Union of Crystallography - IUCr 2017)*, Hyderabad, IN, Aug. 18-20, 2017.
7. **Pandey, Komal** and **Dalvi, Sameer V.**, "Precipitation and stabilization of ultrafine particles of fenofibrate in aqueous suspensions", in *the Pharmaceutical Powder X-ray Diffraction Symposium-15 (A satellite meeting to the 24th Congress & General Assembly of the International Union of Crystallography - IUCr 2017)*, Hyderabad, IN, Aug. 18-20, 2017.
8. **Upadhyay, Awaneesh**; **Desai, Preeti** and **Dalvi, Sameer V.**, "Microbubbles-mediated enhanced delivery of Curcumin to HeLa Cells", in *the 91st ACS Colloids and Surface Science Symposium*, The City College of New York, IN, Jul. 09-12, 2017.

9. S. Indumathi and **Dalvi Sameer V.**, "Understanding the mechanism of Curcumin Eutectics/Cocrystal formation with Salicylic acid and Hydroxyquinol" in ChEmference 2016, 7th National Level Annual Research Symposium of Chemical Engineering Research Scholars held from 3rd - 4th December 2016 at Indian Institute of Technology Gandhinagar, India.
10. **Dalvi Sameer V.**, "Polymorphism, Particle Formation Pathways and Long Term Colloidal Stability of Curcumin Particles Precipitated by Liquid Antisolvent Technique", 2nd International Conference on Powder, Granule and Bulk, 2016 (PGBSIA 2016) held in Jaipur, December 1-3, 2016.
11. S.Indumathi and **Dalvi Sameer V.**, "Identification of Stoichiometrically Diverse Curcumin-Hydroxyquinol Cocrystals using Differential Scanning Calorimetry" in World Congress on Drug Discovery and Development 2016 held from 23rd - 25th Nov 2016 at J. N. Tata Auditorium, Indian Institute of Science, Bangalore.
12. Thorat Alpana A. and **Dalvi Sameer V.**, "Concomitant Polymorphism of Curcumin", in PARTEC 2016, held in Nuremberg, Germany, April 19-21, 2016
13. Thorat Alpana A. and **Dalvi Sameer V.**, " Non-classical Crystallization Pathways of Curcumin" Poster presentation at Faraday Discussions held on "Nucleation – a transition state to the directed assembly of materials" in Leeds, UK. 30 March-1, April 2015 (**Ms. Alpana Thorat won the Best poster award from among 80 Posters presented**)
14. Antani, Jyot and **Dalvi, Sameer**, "Current trends in academic research in chemical engineering", in 10th Conference of Outstanding Young Chemical Engineers (OYCE 2014), Thadomal Shahani, Engineering College, Mumbai, IN, Mar. 8-9, 2014.
15. Thorat, Alpana; Yadav, Manishkumar and **Dalvi, Sameer**, "Controlled Liquid Antisolvent Precipitation of Ultrafine Particles of Curcumin in Aqueous Suspensions using Ultrasound and Stabilizers", in the 10th Conference of Outstanding Young Chemical Engineers, (OYCE 2014), Thadomal Shahani, Engineering College, Mumbai, IN, Mar. 8-9, 2014.
16. Yadav, Manishkumar; Thorat, Alpana and **Dalvi, Sameer**, "Stability of aqueous nanosuspensions of curcumin nanoparticles prepared in presence of ultrasound and stabilizers during antisolvent precipitation", in 66th Annual Session of Indian Institute of Chemical Engineers, (CHEMCON 2013), ICT, Mumbai, IN, Dec. 27-30, 2013.
17. Alpana A. Thorat, Manishkumar D. Yadav and **Sameer V. Dalvi**, "Preparation of Stable Aqueous Suspensions of Curcumin Nanoparticles for Pharmaceutical Applications", presented at PARTEC 2013 held in Nuremberg, Germany from 23rd-25th April, 2013
18. Kumar K. Arjun, Mukhopadhyay Mamata, Vinjamur Madhu and **Dalvi Sameer V.**, "Precipitation of ultra-fine particles by pressure reduction of gas expanded liquids: Experiments and mathematical modeling," in 10th International Symposium on Supercritical Fluids, San Francisco, CA, Apr. 4, 2012.
19. Alpana Thorat, **Sameer V Dalvi**, "Controlled Liquid Antisolvent Precipitation of Ultrafine Particles of Curcumin in Aqueous Suspensions using Ultrasound and Stabilizers", Oral presentation made by Ms. Alpana Thorat in 64th CHEMCON Conference held in Bangalore from December 27-29th, 2011.
20. **Sameer V. Dalvi**, Markus Wolkenhaeur and Rajesh N. Dave, "Control of Particle Size and Analysis of Nucleation Kinetics of Poorly Water Soluble Drugs during Antisolvent Precipitation" Accepted as Cutting Edge Lecture, World Congress on Particle Technology 6, 2010 to be held in Nuremberg, Germany from 20-24th April, 2010.
21. **Sameer V. Dalvi** and Rajesh N. Dave, "Precipitation of Poorly Water Soluble Drugs using Ultrasound and Stabilizers: Controlling Process Parameters" Annual Meeting of AIChE at Nashville, TN, November 8-13, 2009.

22. Christian Beck, **Sameer V. Dalvi** and Rajesh N. Dave, "Controlled Liquid Antisolvent Precipitation of Poorly Water Soluble Drugs using a Scalable Rapid Mixing Device" Annual Meeting of AIChE at Nashville, TN, November 8-13, 2009.
23. Daniel To, **Sameer V. Dalvi**, Sankaran Sundaresan and Rajesh N. Dave, "Deagglomeration and Mixing of Nanopowders Using RESS Based Methods" Annual Meeting of AIChE at Nashville, TN, November 8-13, 2009.
24. **Sameer V. Dalvi**, Rajesh N. Dave and Somenath Mitra, "Polymers and Surfactants at Solid-Liquid Interfaces: Curtailing Particle Size and Distribution by Liquid Antisolvent Precipitation with Ultrasound", at Annual Meeting of AIChE at Philadelphia, PA, November 17-21, 2008.
25. Dhananjay Singh, **Sameer V. Dalvi**, and Rajesh N. Dave, "Precipitation of Ultra-fine Particles of Fenofibrate with Controlled Size Distribution by RESOLV: Rapid Expansion Vs Stabilizer Concentrations", at Annual Meeting of AIChE at Philadelphia, PA, November 17-21, 2008.
26. Anagha Bhakay, **Sameer V. Dalvi**, Rajesh N. Dave and Habibe Karacay, "Preparation and Stabilization of Biodegradable Cationic Polyelectrolyte Complexes for Targeted Drug Delivery", at Annual Meeting of AIChE, Philadelphia, PA, November 17-21, 2008.
27. Daniel To, **Sameer V. Dalvi**, and Rajesh N. Dave, "Formation of Mullite Precursor by Rapid Expansion of High Pressure Suspensions of Alumina and Silica in Supercritical CO₂" at Annual Meeting of AIChE, Philadelphia, PA, November 17-21, 2008 .
28. **Sameer V. Dalvi** and Mamata Mukhopadhyay, "A Novel Process for Production of Ultra-Fine Particles using Sub-critical Carbon Dioxide", In-house Research Scholar's Symposium at Department of Chemical Engineering, IIT-Bombay, February 2007.
29. **Sameer V. Dalvi** and Mamata Mukhopadhyay, "Modeling of Supersaturation for Depressurization of (CO₂)-Expanded Liquid Organic Solution (DELOS) for Formation of Nanoparticles", in the Proc. of Indo-US session, Chem-Con-04, A.I.Ch.E.-I.I.Ch.E. Joint convention, December-2004.
30. Mamata Mukhopadhyay and **Sameer V. Dalvi**, "Effects of Thermodynamic States on Supersaturation within a Moving Droplet for SAS Crystallization", in the proceedings of the 11th International Symposium on Supercritical Fluids, held at Pittsburg, USA, August 1-4, 2004.
31. Mamata Mukhopadhyay and **Sameer V. Dalvi**, "A New Thermodynamic Method for Solid-Liquid-Vapor Equilibrium in Ternary Antisolvent Crystallization Systems Using Binary Data", in the proceedings of the 6th International Symposium on Supercritical Fluids, held at Versailles, France, April 28-May 1, 2003.
32. Mamata Mukhopadhyay and **Sameer V. Dalvi**, "Prediction of Supersaturation Behaviour in Supercritical Antisolvent Crystallisation from PMVF of solvent in binary (CO₂-solvent) mixture", in the Proc. of Chem-Con , I.I.Ch.E. Convention, December-2003.
33. Mamata Mukhopadhyay and **Sameer V. Dalvi**, "Process Modeling and Analysis of Supercritical Antisolvent Crystallization Technique for Formation of Nanoparticles", In-House Symposium on Nanotechnology @ IITB, September 13, 2003.
34. Mamata Mukhopadhyay and **Sameer V. Dalvi**, "Solid Solubility Prediction from Partial Molar Volume Fraction of Solvent in Antisolvent-Solvent Mixture", in the proceedings of Super Green-2002, held at Suwon, South Korea during November 3-6, 2002.

PATENT:

1. **A Novel Method for Production of Nanoparticles using Sub-critical Carbon Dioxide**, Granted Indian Patent (Number 544/MUM/2004).