CURRICULUM VITAE

MARIA SILVINA TOMASSONE, Ph. D.

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A. PROFESSIONAL PREPARATION

Ph.D.	1998	Physics, Northeastern University, MA
M.Sc.	1995	Physics, Northeastern University, MA
Post Doc	1999-2001	Chemical Engineering Levich Institute, City College of New York, City University of New York, NY

B. APPOINTMENTS

2018- Present	Professor I
2008- 2018	Associate Professor, Department of Chemical & Biochem Engineering, Rutgers University
2001-2008	Assistant Professor, Department of Chemical & Biochem Engineering, Rutgers University
2003 -Present	Adjunct Professor, Department of Biomedical Engineering, Rutgers University
2005-2010	Co-Director and Co-PI, Rutgers NSF-IGERT Program on Nanopharmaceuticals
2006- Present	Associate Editor Experimental Biology and Medicine Journal
1999-2001	Post-Doctoral Fellow, Levich Institute and Department of Chemical Engineering, City College of New York, NY

C. SELECTED PROFESSIONAL HONORS (2001-2024)

2024	H-Index= 25 (Google Scholar) Citations=2591 https://scholar.google.com/citations?user=HufnxjcAAAAJ&hl=en
2024	Web of Science: Average citations per item in Web of Sci= 30.17
2024	H-Index=25 (Research Gate); I-10 index=43 https://www.researchgate.net/profile/Maria-Tomassone/stats Research Gate Interest Score=1167

2022-2024 Elected Vice Chair of the AICHE Particle Technology (PTF)

2022-2024 Elected Chair of AICHE Particle Technology Forum (PTF)

2021-2023 Elected Vice Chair of Area 3C AICHE Particle Technology (PTF)

2023-2025 Elected Chair Area 3C AICHE Particle Technology Forum (PTF)

2022-2026 Member of the Executive Committee AICHE Particle Technology Forum (PTF)
2016 Best Paper AICHE San Francisco 2016, Dynamics and Modeling of Particles, Crystals and Agglomerate Formation
2016 Professor of the Year 2016 Chemical and Biochemical Engineering Award, EGC
2013 *First Place ChemE Car Annual Competition*, Rutgers University, Advisor
2011 Excellence in Teaching 2011 Chemical and Biochem. Engineering Award, EGC
2010 Excellence in Teaching 2010 Chemical and Biochem. Engineering Award, EGC
2008 Board of Trustees Fellowship for Scholarly Excellence
2006 Teaching Excellence Award 2006
2006 *Pfizer Young Faculty Award* for Excellence in Research
2005 National Science Foundation IGERT Award on Nanopharmac. Eng. and Science
2005 Rutgers FASIP Award for Teaching, Research, and Service
2003 Rutgers FASIP Award for Teaching, Research, and Service
2001 *Merck Excellence* Graduate Fellowship and Faculty Development Award
2001 Rutgers FASIP Award for Teaching, Research, and Service

D. PUBLICATIONS

D.1. Peer Reviewed Publications [1-50]

1 Shen, Y., Pengfei Xu, Hernan A. Makse. & Tomassone, M. S. Scale-up of Dry Impregnation Process *Powder Technology; Submitted* ***(Accepted for Publication)*** (2024).

2. Operation parameters and design optimization based on CFD simulations on a novel spray dispersion desulfurization tower , Fuel Processing Technology, Vol 209, Article N0. 106514, 2021, DOI10.1016/j.fuproc.2020.106514Liu, J (Liu, Jing) ; Tomassone, MS (Tomassone, Maria Silvina) ; Kuang, XY (Kuang, Xuyuan) ; Zhou, SH (Zhou, Songhua)

3. Diversity increases the stability of ecosystems, Plos One. Lucini, FA (Lucini, Francesca Arese; Morone, F (Morone, Flaviano); Tomassone, MS (Tomassone, Maria Silvina; Makse, HA (Makse, Hernan A. Volume 15 Issue4 , DOI10.1371/journal.pone.0228692 Article Number e0228692Published APR 24 2020

4. K-core robustness in ecological and financial networks, Nature Scientific Reports By: Burleson-Lesser, K (Burleson-Lesser, Kate ; Morone, F (Morone, Flaviano) [1] , [2] ; Tomassone, MS (Tomassone, Maria S.) [4] ; Makse, HA (Makse, Hernan A.) [1] , [2]Source Volume 10 Issue1, DOI10.1038/s41598-020-59959-4 Article Number, 3357 Published FEB 25 2020

5. Winkler, Jennifer S.; Barai, Mayur; Tomassone, Maria S.; "Dual drug-loaded biodegradable Janus particles for simultaneous co-delivery of hydrophobic and hydrophilic compounds"; *Experimental Biology and Medicine***,** Volume: 244 Issue: 14 Pages: 1162-1177 (2020)

6 Smith, K. B. & Tomassone, M. S. Core-shell Graphene/Silicon Nanoparticles for use as Lithium-ion Battery Anodes. *Langmuir; Submitted (Under Review)* (2024).

7 Clark, M. D., Morris, K. R. & Tomassone, M. S. Correlation of Solubility with the Metastable Limit of Nucleation Using Gauge-Cell Monte Carlo Simulations. *Langmuir* **33**, 9081-9090, doi:10.1021/acs.langmuir.7b01939 (2017).

8 Smith, K. B. & Tomassone, M. S. Ultra-Thin Hollow Graphene Oxide Membranes for use as Nanoparticle-Carriers. *Langmuir : the ACS journal of surfaces and colloids* **33**, 3765-3775 (2017).

9 Shen, Y., Borghard, W. & Tomassone, M. S. Discrete Element Method Simulations and Experiments of Dry Catalyst Impregnation in a Double Cone Blender. *Powder Technology* **318**, 23-32 (2017).

10 Garbuzenko, O. B., Winkler, J., Tomassone, M. S. & Minko, T. Biodegradable Janus Nanoparticles for Local Pulmonary Delivery of Hydrophilic and Hydrophobic Molecules to the Lungs. *Langmuir : the ACS journal of surfaces and colloids* **30**, 12941-12949, doi:10.1021/1a502144z (2014).

11 Tomasini, M. D., Zablocki, K., Petersen, L. K., Moghe, P. V. & Tomassone, M. S. Coarse Grained Molecular Dynamics of Engineered Macromolecules for the Inhibition of Oxidized Low-Density Lipoprotein Uptake by Macrophage Scavenger Receptors. *Biomacromolecules* **14**, 2499-2509, doi:10.1021/bm301764x (2013).

12 Zhu, W. S., Romanski, F. S., Dalvi, S. V., Dave, R. N. & Tomassone, M. S. Atomistic simulations of aqueous griseofulvin crystals in the presence of individual and multiple additives. *Chemical Engineering Science* **73**, 218-230, doi:10.1016/j.ces.2012.01.008 (2012).

13 Tomasini, M. D. & Tomassone, M. S. Dissipative particle dynamics simulation of poly(ethylene oxide)-poly(ethyl ethylene) block copolymer properties for enhancement of cell membrane rupture under stress. *Chemical Engineering Science* **71**, 400-408, doi:10.1016/j.ces.2011.10.061 (2012).

14 Romanski, F. S., Winkler, J. S., Riccobene, R. C. & Tomassone, M. S. Production and Characterization of Anisotropic Particles from Biodegradable Materials. *Langmuir : the ACS journal of surfaces and colloids* **28**, 3756-3765, doi:10.1021/la2044834 (2012).

15 Romanski, F. S., Dubey, A., Chester, A. W. & Tomassone, M. S. Dry catalyst impregnation in a double cone blender: A computational and experimental analysis. *Powder Technology* **221**, 57-69, doi:10.1016/j.powtec.2011.12.018 (2012).

16 Zhu, W. S., Romanski, F. S., Meng, X. X., Mitra, S. & Tomassone, M. S. Atomistic simulation study of surfactant and polymer interactions on the surface of a fenofibrate crystal. *European Journal of Pharmaceutical Sciences* **42**, 452-461, doi:10.1016/j.ejps.2011.01.009 (2011).

17 Romanski, F. S., Jayjock, E., Muzzio, F. J. & Tomassone, M. S. Important Factors in the Size Reduction of Polymer-Stabilized Drug Particle Suspensions Using High-Pressure Homogenization. *Journal of Pharmaceutical Innovation* **6**, 97-106, doi:10.1007/s12247-011-9107-5 (2011).

18 Mendez, R., Romanski, F. S. & Tomassone, M. S. Density behavior of cohesive granular materials. *Powder Technology* **211**, 189-198, doi:10.1016/j.powtec.2010.11.024 (2011).

19 Tomasini, M. D., Rinaldi, C. & Tomassone, M. S. Molecular dynamics simulations of rupture in lipid bilayers; . *Experimental Biology and Medicine* **232**, 181-188 (2010).

20 Pingali, K. C., Tomassone, M. S. & Muzzio, F. J. Effects of Shear and Electrical Properties on Flow Characteristics of Pharmaceutical Blends. *Aiche Journal* **56**, 570-583, doi:10.1002/aic.12047 (2010).

21 Faqih, A. N., Chaudhuri, B., Mehrotra, A., Tomassone, M. S. & Muzzio, F. Constitutive model to predict flow of cohesive powders in bench scale hoppers. *Chemical Engineering Science* **65**, 3341-3351, doi:10.1016/j.ces.2010.02.028 (2010).

22 Chaudhuri, B., Muzzio, F. J. & Tomassone, M. S. Experimentally validated computations of heat transfer in granular materials in rotary calciners. *Powder Technology* **198**, 6-15, doi:10.1016/j.powtec.2009.09.024 (2010).

23 Mehrotra, A., Chaudhuri, B., Faqih, A., Tomassone, M. S. & Muzzio, F. J. A modeling approach for understanding effects of powder flow properties on tablet weight variability. *Powder Technology* **188**, 295-300, doi:10.1016/j.powtec.2008.05.016 (2009).

24 Vishnyakov, A., Shen, Y. Y. & Tomassone, M. S. Interactions of silica nanoparticles in supercritical carbon dioxide. *Journal of Chemical Physics* **129**, doi:10.1063/1.2994714 (2008).

25 Vishnyakov, A., Shen, Y. & Tomassone, M. S. Solvation Forces Between Silica Bodies in Supercritical Carbon Dioxide. *Langmuir : the ACS journal of surfaces and colloids* **24**, 13420-13425, doi:10.1021/la8010508 (2008).

26 Portillo, P. M. *et al.* Quality by Design Methodology for Development and Scale-Up of Batch Mixing Processes, Innov 3: DOI 10. *1007s122470089048* **9**, 258-270 (2008).

27 Faqih, A. N., Alexander, A. W., Muzzio, F. J. & Tomassone, M. S. A method for predicting hopper flow characteristics of pharmaceutical powders. *Chemical Engineering Science* **62**, 1536-1542, doi:10.1016/j.ces.2006.06.027 (2007).

28 Li, T., Li, B. & Tomassone, M. S. Surface characterization of aspirin crystal planes using molecular dynamics simulations. *Chemical Engineering Science* **61**, 5159-5169, doi:10.1016/j.ces.2006.03.022 (2006).

29 Goyal, R. K. & Tomassone, M. S. Power-law and exponential segregation in two-dimensional silos of granular mixtures. *Physical Review E* **74**, doi:10.1103/PhysRevE.74.051301 (2006).

39 Faqih, A. *et al.* Flow-induced dilation of cohesive granular materials. *Aiche Journal* **52**, 4124-4132, doi:10.1002/aic.11014 (2006).

31 Faqih, A. *et al.* An experimental/computational approach for examining unconfined cohesive powder flow. *International Journal of Pharmaceutics* **324**, 116-127 (2006).

32 Dubey, A., Mavroidis, C. & Tomassone, M. S. Molecular dynamic studies of viral-protein based nano-actuators. *Journal of Computational and Theoretical Nanoscience* **3**, 885-897, doi:10.1166/jctn.2006.005 (2006).

33 Chaudhuri, B., Muzzio, F. J. & Tomassone, M. S. Modeling of heat transfer in granular flow in rotating vessels. *Chemical Engineering Science* **61**, 6348-6360, doi:10.1016/j.ces.2006.05.034 (2006).

34 Chaudhuri, B., Mehrotra, A., Muzzio, F. J. & Tomassone, M. S. Cohesive effects in powder mixing in a tumbling blender. *Powder Technology* **165**, 105-114, doi:10.1016/j.powtec.2006.04.001 (2006).

35 Alexander, A. W. *et al.* Avalanching flow of cohesive powders. *Powder Technology* **164**, 13-21, doi:10.1016/j.powtec.2006.01.017 (2006).

36 Tomassone, M. S., Chaudhuri, B., Faqih, A., Mehrotra, A. & Muzzio, F. J. DEM Simulations for fundamental process understanding. *Pharmaceutical Technology* **29**, S28-S35 (2005).

37 Shen, Y. Y., Couzis, A., Koplik, J., Maldarelli, C. & Tomassone, M. S. Molecular dynamics study of the influence of surfactant structure on surfactant-facilitated spreading of droplets on solid surfaces. *Langmuir : the ACS journal of surfaces and colloids* **21**, 12160-12170, doi:10.1021/la051354c (2005).

38 Sharma, G. *et al.* Kinematics and workspace analysis of protein based nano-actuators. *Journal of Mechanical Design* **127**, 718-727, doi:10.1115/1.1900751 (2005).

39 Dubey, A. *et al.* Computational Studies of Viral Protein Nano-Actuators. *Journal of Computational and Theoretical Nanoscience* **1**, 18-28, doi:10.1166/jctn.2003.003 (2004).

40 Tomassone, M. S., Couzis, A., Maldarelli, C. M., Banavar, J. R. & Koplik, J. Molecular dynamics simulation of gaseous-liquid phase transitions of soluble and insoluble surfactants at a fluid interface. *Journal of Chemical Physics* **115**, 8634-8642, doi:10.1063/1.1398077 (2001).

41 Tomassone, M. S., Couzis, A., Maldarelli, C., Banavar, J. R. & Koplik, J. Phase transitions of soluble surfactants at a liquid-vapor interface. *Langmuir : the ACS journal of surfaces and colloids* **17**, 6037-6040, doi:10.1021/la0103113 (2001).

42 Widom, A., Tomassone, M. S., Srivastava, Y. N. & Hannout, M. Net charge on a noble-gas atom adsorbed on a metallic surface. *Physical Review B* **62**, 16085-16091, doi:10.1103/PhysRevB.62.16085 (2000).

43 Sokoloff, J. B., Tomassone, M. S. & Widom, A. Strongly temperature dependent sliding friction for a superconducting interface. *Physical Review Letters* **84**, 515-517, doi:10.1103/PhysRevLett.84.515 (2000).

44 Tomassone, M. S. & Sokoloff, J. B. Effects of defects on friction for a Xe film sliding on Ag(111). *Physical Review B* **60**, 4005-4017, doi:10.1103/PhysRevB.60.4005 (1999).

45 Sokoloff, J. B. & Tomassone, M. S. Effects of surface defects on friction for a thin solid film sliding over a solid surface. *Physical Review B* **57**, 4888-4894, doi:10.1103/PhysRevB.57.4888 (1998).

46 Tomassone, M. S. & Widom, A. Electronic friction forces on molecules moving near metals. *Physical Review B* **56**, 4938-4943, doi:10.1103/PhysRevB.56.4938 (1997).

47 Tomassone, M. S. & Widom, A. Friction forces on charges moving outside of a conductor due to Ohm's law heating inside of a conductor. *American Journal of Physics* **65**, 1181-1183, doi:10.1119/1.18770 (1997).

48 Tomassone, M. S., Sokoloff, J. B., Widom, A. & Krim, J. Dominance of phonon friction for a xenon film an a silver (111) surface. *Physical Review Letters* **79**, 4798-4801, doi:10.1103/PhysRevLett.79.4798 (1997).

49 Tomassone, M. S. & Krim, J. Fractal scaling behavior of water flow patterns on inhomogeneous surfaces. *Physical Review E* **54**, 6511-6515, doi:10.1103/PhysRevE.54.6511 (1996).

50 Cuerno, R., Makse, H. A., Tomassone, S., Harrington, S. T. & Stanley, H. E. Stochastic model for surface erosion via ion sputtering - Dynamical evolution from ripple morphology to rough morphology. *Physical Review Letters* **75**, 4464-4467, doi:10.1103/PhysRevLett.75.4464 (1995).

D.2. Book Chapters

51 Winkler, J. S. *et al.* in *in Biotechnology Vol8 Novel Drug Delivery Eds Bhupinder Singh and Studium Press Biodegradable Janus Nanoparticles for Local Pulmonary Delivery of Hydrophilic and Hydrophobic Molecules to the Lungs By Garbuzenko Winkler Jennifer Tomassone M S 30 Issue 43 Pages* Vol. 6 SRC - GoogleScholar 12941-12949 (2014).

52 Dubey, A. & Tomassone, M. S. Viral Protein Nano-Actuators: Computational Studies of Bio-nanomachines. *Encyclopedia of Complexity and System Science* **11**, 46-49 (2009).

Conference Proceedings

53 Cuerno, R., Makse, H. A., Tomassone, S., Harrington, S. T. & Stanley, H. E. in *Disordered Materials and Interfaces* Vol. 407 *Materials Research Society Symposium Proceedings* (eds H. Z. Cummins, D. J. Durian, D. L. Johnson, & H. E. Stanley) 307-312 (Materials Research Soc, 1996).

54 Dubey, A. *et al.* in *Nanotechnology Conference and Trade Show.* 7-11 (Nanotechnology Conference and Trade Show).

55 Dubey, A. *et al.* in *NSTI Nanotech 2004Nanotech 2004 Vol. 1Technical Proceedings of the 2004 NSTI Nanotechnology Conference and Trade Show* (eds M. Laudon & B. Romanowicz) 110-113 (Nano Science & Technology Inst).

56. Lee, JY; Chester, A; Tomassone, S; et al." Chemical properties of catalyst support: Characterization of gamma-alumina and its precursor alpha-aluminum hydroxide."; Conference: 228th National Meeting of the American-Chemical-Society Location: Philadelphia, PA Date: AUG 22-26, 2004; Sponsor ACS.; ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY Volume: 228 Pages: U797-U797 Part: 1 Meeting Abstract: 134-INOR Published: AUG 22 2004

57 Dubey, A. *et al.* in *2004 Ieee International Conference on Robotics and Automation, Vols 1- 5, Proceedings IEEE International Conference on Robotics and Automation ICRA* 1628-1633 (Ieee, 2004).

58 Sharma, G., Badescu, M., Mavroidis, C. & Tomassone, M. S. in *ASME. International Design Engineering Technical Conferences and Computers and Information in Engineering Conference* Vol. 2 (ed ASME Proceedings | 28th Biennial Mechanisms and Robotics Conference) 1447-1456 (ASME Design Technical Conferences Salt Lake City, Utah, 2004).

59 Shen, Y. Y., Romanski, F. S., Dubey, A., Chester, A. W. & Tomassone, M. S. in *Abstracts of Papers of the American Chemical Society* Vol. 244 (Philadelphia, PA, 2012).

60 Sokoloff, J. B. & Tomassone, M. S. in *Abstracts of Papers of the American Chemical Society.* U589-U589.

61 Sokoloff, J. B. & Tomassone, M. S. Effects of defects on friction for a xenon film sliding on a silver(111) surface. *Abstracts of Papers of the American Chemical Society* **217**, U589-U589 (1999).

D. 3. Papers in Preparation

62 Shen, Y., Borghard, W. & Tomassone, M. S. DEM investigation and experiments of dry catalyst impregnation in a double cone blender for improved mixing with Buffles. *Powder Technology* **To be submitted** (2024).

63 Shen, Y., Shim, J. & Tomassone, M. S. Effect of Shaker's geometry on Brazil Nut Effect and Reverse Brazil Nut Effect. *Nature Scientific Reports* **To be submitted** (2024).

64 Shen, Y., Vishnykov, A. & Tomassone, M. S. Molecular dynamics studies on the dispersion of silica nanoparticle in polyethylene melt. *Journal of Chemical Physics* **To be submitted** (2024).

65 Smith, K. B. Resilient Graphene Based Foams". *Catalysis Today* **To be submitted** (2024).

66 Winkler, J. S., Clark, M. D. & Tomassone, M. S. Thermodynamic Model For the Prediction of Janus Particle Morphology. *Journal of Physical Chemistry* **To be submitted to Journal of Physical Chemistry** (2024).

67 Winkler, J. S., Romanski, F. S. & Tomassone, M. S. Effect of Surfactant and Solvent Properties on the Formation of Pharmaceutical Nanosuspensions by Emulsion Diffusion. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* **To be submitted** (2024).

E. PATENTS (# classified by Patents granted; PCT application; Provisional or Disclosures)

US Patents Granted:

Hollow Particles formed from 2-dimensional Materials, Maria Tomassone, Kurt Smith, **US Patent N0. US 11,069,890 B2 Date of Patent: July 20 2021.** (Date of file: May 31st, 2017)

Provisional Patents:

1. **RU DOCKET # 05-056** "Method to measure powder dilation in rotating drums" Fernando J. Muzzio and M. S. Tomassone, Filed June 2005
2. **RU DOCKET #12-036:** "Method for producing biodegradable anisotropic "Janus" particles"; Frank S.Romanski, J. S. Winkler, and M. S. Tomassone (Filed April 2011)
3. **RU DOCKET #12-157:** "Method for producing Fenofibrate Particles"; Frank S.Romanski, J. S. Winkler, and M. S. Tomassone (Filed May 2011).
4. **RU DOCKET: 62-343480**. "Hollow particles for 2 Dimensional Materials". Kurt Smith and M.S. Tomassone, Filed May 31st, 2016.
5. **US PATENT: Full Patent Application** "Hollow particles for 2 Dimensional Materials". Kurt Smith and M.S. Tomassone, Filed May 31st, 2017.

F. Conference Presentations

1. AICHE Annual Conference 2023 Orlando, FL, "Continuous Impregnation of Catalyst Particles in a Rotating Drum Using Discrete Element Method and Machine Learning Approaches" , Maria Tomassone (Speaker), Pengfei Xu, Hernan Makse and Kuang Liu, Talk, November 7th, 2023
2. AICHE Annual Conference 2023, Orlando, FL, Impregnation of Catalyst Particles in a Rotating Drum with Baffles: Systematic Study Using Discrete Element Methods and Mass Transfer Theory, Maria Tomassone (Speaker) , Pengfei Xu, Kuang Liu, and Hernan Makse, November 6th, 2023

3. AICHE Annual Conference 2022, Phoenix, AZ, "Impregnation of Catalysts: Batch and Continuous Processes", Maria Tomassone (Speaker), William Borghard, Yangyang Shen, Talk, November 15th, 2022
4. AICHE Annual Meeting, Orlando, FL, November 2019 Core-Shell Graphene/Silicon Nanoparticles for Use As Lithium-Ion Battery Anodes" Kurt. B. Smith and M. Silvina Tomassone
5. AICHE Annual Meeting Orlando, FL November 2019, "Impregnation of Catalysts with Viscous Metal Solutions Using Experiments and DEM Simulations", Y. Shen, B. Borhghard and M. S. Tomassone.
6. AICHE Annual Meeting Orlando, FL, November 2019, "Scale up Studies of Dry Catalyst Impregnation for Improved Content Uniformity Using Simulations and Experiments", Y. Shen, B. Borghard, M. S. Tomassone.
7. AICHE Annual Meeting Pittsburgh, PA, October 2018 Core-Shell Graphene/Silicon Nanoparticles for Use As Lithium-Ion Battery Anodes" Kurt. B. Smith and M. Silvina Tomassone
8. AICHE Annual Meeting Pittsburgh, PA, October 2018, "Impregnation of Catalysts with Viscous Metal Solutions Using Experiments and DEM Simulations", Y. Shen, B. Borhghard and M. S. Tomassone.
9. AICHE Annual Meeting Pittsburgh, PA, October 2018, "Scale up Studies of Dry Catalyst Impregnation for Improved Content Uniformity Using Simulations and Experiments", Y. Shen, B. Borghard, M. S. Tomassone.
10. 8th World Congress on Particle Technology in Orlando, FL. "Experiments and Simulations on Particle Impregnation By Metal Solutions for Industrial Catalysts: From Fundamentals to Scale up", April 25, 2018
11. AIChE Annual Meeting (Particle Technology Forum, Session: Novel Nanoparticles and Nanostructured Materials for Energy & Environmental Applications I), Minneapolis, MN; Kurt B. Smith and M. Silvina Tomassone. Ultrathin Hollow Graphene Oxide Membranes for Use As Nanoparticle Carriers for Energy and Biomedical Applications. Oral Presentation. November 2, 2017.
12. AIChE Annual Meeting (Particle Technology Forum, Session: Characterization of Engineered Particles and Nanostructured Particulate Systems). Minneapolis, MN
    Kurt B. Smith and M. Silvina Tomassone. Core-Shell Nanostructured Anodes for Lithium Ion Batteries. Oral Presentation. October 30, 2017
13. AICHE Annual Meeting, San Francisco, November, 2016; "Thermodynamic Model for the Prediction of Janus Particle Morphology and Interfacial Tensions", M.S. Tomassone (Speaker) and J. Winkler, contributed talk.
14. AICHE Annual Meeting, San Francisco, November, 2016; "Engineered Silicon Graphene Oxide Anodes for Lithium Ion Batteries"; Kurt B. Smith and M. Silvina Tomassone, contributed talk.
15. AICHE Annual Meeting, San Francisco, November, 2016; "Dual Drug-Loaded Janus Particles for Co-Delivery of Hydrophobic and Hydrophilic Compounds", M. S. Tomassone (Speaker) and J. Winkler, contributed talk.
16. AICHE Annual Meeting, San Francisco, November, 2016; "Simulation and Experimental Studies of Dry Catalyst Impregnation for Improved Content Uniformity and Scale up" Yangyang Shen, William G. Borghard and M. Silvina Tomassone, contributed talk.

17. AICHE Annual Meeting Salt Lake City, November 2015, Optimization and Scale up of Dry Impregnation Using DEM Simulations, Y. Shen , M.S. Tomassone, contributed talk.
18. AICHE Annual Meeting Salt Lake City, November 2015, Bicompartmental Janus Particles for Dual Drug Delivery with Independent Release Kinetics. Tomassone, M. S., contributed talk.
19. AICHE Annual Meeting Salt Lake City, November 2015, Graphene Oxide Based Foams for Lithium Ion Batteries, K. Smith, M.S. Tomassone, Contributed talk.
20. AICHE Annual Meeting Atlanta, GA, November 2014, Optimization and Scale up of Dry Impregnation Using DEM Simulations, Y. Shen, M. S Tomassone.
21. AICHE Annual Meeting Atlanta, GA, November 2014, Morphology Prediction of Janus Particles, J. Winkler, M.S. Tomassone, Contributed talk.
22. AICHE Annual Meeting Atlanta, GA, November 2014, Janus Particles Generated By Single and Double Emulsions for Simultaneous Encapsulation of Hydrophilic and Hydrophobic Compounds, J. Winkler, M. S. Tomassone, Contributed talk.
23. AICHE Annual Meeting San Francisco, November 2013. "DEM Simulation Scale-Up Study of Dry Impregnation Processes", Dynamics and Modeling of Particulate Systems I, Y. Shen, M. S. Tomassone, Contributed talk.
24. AICHE Annual Meeting San Francisco, November 2013, "Determining The Metastable Limit Of Nucleation From Gauge-CELL Monte Carlo Simulations", Michael Clark, M. S. Tomassone, Contributed talk.
25. AICHE Annual Meeting San Francisco, November 2013, "Study of the Formation and Morphology of Biodegradable Polymeric Janus Particles Via Atomistic Simulation of Interfacial Interactions" Jennifer Winkler, M.S. Tomassone, Contributed talk.
26. AICHE Annual Meeting San Francisco, November 2013, "Graphene Based Composites for Electrochemical Applications", K.B. Smith, M. S. Tomassone, Contributed talk.
27. AICHE Annual Meeting San Francisco, November 2013, Session: Composites for Energy Applications Biodegradable Janus Particles for Drug Delivery: Bi-Compartmental Encapsulation of Two API of Disparate Solubility, Engineered Composite Particulate Systems for Pharmaceutical Active Ingredient Delivery, Jennifer Winkler, M.S. Tomassone, Contributed talk.
28. AICHE Annual Meeting Pittsburgh, November 2012, Resilient Graphene Based Foams *Session: Composites*., K. Smith, M.S. Tomassone. Contributed talk.
29. AICHE Annual Meeting Pittsburgh, November 2012, Improved Mixing in Dry Catalyst Impregnation Using a Double Cone Blender: An Experimental and Computational Approach *Session: Dynamics and Modeling of Particulate Systems,* Y. Shen and M. S.Tomassone. Contributed talk.
30. AICHE Annual Meeting Pittsburgh, November 2012; Engineered Macromolecules As Inhibitors to Oxidized Low Density Lipoprotein by Macrophage Scavenger Receptors: Simulation of Structure – Function Relationships, Session: Simulation-Based Engineering and Science for Biomedical Advances II, M. Tomasini, M.S. Tomassone. Contributed Talk.
31. AICHE Annual Meeting Pittsburgh, November 2012; Relationship Between Solution Metastable Limit and Solubility. *Session: Engineered Composite Particulate Systems for Pharmaceutical Active Ingredient Delivery I,* M. Tomasini, and M. S. Tomassone. Contributed Talk.

32. AICHE Annual Meeting Pittsburgh, November 2012. Molecular Simulation Studies of Quantitative Correlation Between the Stability of Drug Nanocrystals Suspension System and Certain Properties of Both the Drug API and the Stabilizer *Session: Engineered Composite Particulate Systems for Pharmaceutical Active Ingredient Delivery II,* W. Zhu, F. Romanski, M. S. Tomassone. Contributed talk.
33. AICHE Annual Meeting Pittsburgh, November 2012, Engineered Biodegradable Janus Particles for Drug Delivery. *Session: Engineered Composite Particulate Systems for Pharmaceutical Active Ingredient Delivery II. J. Winkler, M.S. Tomassone*. Contributed talk.
34. AICHE Annual Meeting Minneapolis, November 2011, "A Coarse Grained Model of Inhibitors to Scavenger Receptor Uptake to LDL", Session Multiscale Modeling, Mike Tomasini, M. S. Tomassone.
35. AICHE Annual Meeting Minneapolis, November 2011, "Quantitative Correlation for the Stability of Pharmaceutical Nanosuspensions and Their Physicochemical Properties" Session: Synthesis, Characterization and Modeling of Nanoparticle Systems with Pharmaceutical Applications, Wusheng Zhu, Francis S. Romanski, M. S. Tomassone.
36. AICHE Annual Meeting Minneapolis, November 2011, "Control of Crystallization Using Polymeric Additives"; Session: Dynamics and Modeling of Particles, Crystals and Agglomerate Formation, Wusheng Zhu, M.S. Tomassone.
37. AICHE Annual Meeting Minneapolis, November 2011, Molecular Simulation Studies On the Rheological Properties of Silica Nanoparticles Embedded In a Polyethylene Melt. Y. Shen, A. Vishnakov, M. S. Tomassone. Contributed talk.
38. AICHE Annual Meeting Minneapolis, November 2011, Simulations and Experiments of Dry Catalyst Impregnation for Improved Content Uniformity, Session: Science and Engineering of Catalyst Preparation II , Y. Shen, M. S. Tomassone. Contributed Talk.
39. AICHE Annual Meeting Salt Lake City, November 2010, Optimization of Catalyst Impregnation Process Using a Combination of Experimental and DEM Modeling Study, Frank Romanski, Atul Dubey, Arthur Chester, M. Silvina Tomassone. Contributed talk.
40. AICHE Annual Meeting Salt Lake City, November 2010, Surface Characterization of Aspirin Crystal Planes in the Presence of Polymers, Surfactants, and Solvents, Wusheng Zhu, Frank Romanski, M. Silvina Tomassone.
41. AICHE Annual Meeting Salt Lake City, November 2010, Molecular Simulation Studies On the Rheological Properties of Silica Nanoparticles Embedded in a Polyethylene Melt, Yangyang Shen, Aleksey Vishnyakov, M. Silvina Tomassone
42. AICHE Annual Meeting Salt Lake City, November 2010, The Influence of Polymer Properties On the Inhibition of Crystallization, Michael Tomasini, M. Silvina Tomassone
43. AICHE Annual Meeting Salt Lake City, November 2010, Emulsifier Studies and Stability Optimization of the Production of Pharmaceutical Nanosuspensions Using Emulsion Precipitation, Frank Romanski, M. Silvina Tomassone
44. AICHE Annual Meeting Nashville, TN, November 2009, Production of Pharmaceutical Nanoparticles Using An Environmentally-Safe Emulsion Template, Frank Romanski, M. Silvina Tomassone, Fernando J. Muzzio, Paul Takhistov. Contributed talk.
45. AICHE Annual Meeting Nashville, TN, November 2009, Production of Pharmaceutical Nanoparticles Using An Environmentally-Safe Emulsion Template, M. S. Tomassone, W. Zhu, F. Romanski. Contributed talk.

46. AICHE Annual Meeting Nashville, TN, November 2009, Shear Induced Breakage of Nanoparticle Agglomerates in a Supercritical Fluid – A Simulation Study, Yangyang Shen, Aleksey Vishnyakov, M. Silvina Tomassone. Contributed talk.
47. AICHE Annual Meeting Nashville, TN, November 2009, Dissipative Particle Dynamics Simulation On the Effect of Polymeric Coatings in Magnetic Fluid Hyperthermia, Michael Tomasini, M. Silvina Tomassone. Contributed talk.
48. AICHE Annual Meeting Nashville, TN, November 2009, Effects of Shear and Electrical Properties on Flow Characteristics of Pharmaceutical Blends, Kalyana Pingali, M. Silvina Tomassone, Fernando J. Muzzio. Contributed talk.
49. AIChE Annual Meeting, Philadelphia, November 2008, Surface Tension in Pharmaceutical Manufacturing: An Overview and Two Case Studies **(Plenary Talk Invited) M. Silvina Tomassone (speaker)**, F. J. Muzzio Carlos Velázguez, Frank Romanski, Marcos Llisa, Wusheng Zhu.
50. AIChE Annual Meeting, Philadelphia, November 2008, Using DEM Models to Understand Segregation in Mixtures with Continuous Grain Size Distribution in Long Cylinders, Atul Dubey, Fernando J. Muzzio, M. Silvina Tomassone.
51. AIChE Annual Meeting, Philadelphia, November 2008, Production and Stabilization of Organic Crystalline Sub-Micron and Nanoparticles Using High Pressure Homogenization for Drug Delivery, Frank Romanski, M. Silvina Tomassone, Eric Jayjock, Fernando J. Muzzio. Contributed talk.
52. AIChE Annual Meeting, Philadelphia, November 2008, Discrete Element Method Simulations of Dry Impregnation Processes in Catalyst, M. Silvina Tomassone, Charles Radeke, Arthur W. Chester.
53. AIChE Annual Meeting, Philadelphia, Characterization of Density of Cohesive Granular Materials Using An X-Ray CT Scanner, M. S. Tomassone, C. Radeke, D. Jonnavittula. Contributed talk.
54. AIChE Annual Meeting, Philadelphia, November 2008, Atomistic Simulation Studies of Stability Enhancement of Griseofulvin Nanocrystal Aquesous System by Adding Surfactant, Polymer, and Surfactant-Polymer Mixtures, M. S. Tomassone, W. Zhu, F. Romanski. Contributed talk.
55. AIChE Annual Meeting, Philadelphia, November 2008, Molecular Dynamics Simulations of Rupture , in Lipid Bilayers, Michael Tomasini, M. Silvina Tomassone. Contributed talk.
56. AIChE Annual Meeting, Philadelphia, November 2008, Coarse-Grained Model and Molecular Dynamics Studies on the Dispersion of Silica Nanoparticles in a Polyethylene Melt, Yangyang Shen, Aleksey Vishnyakov, M. Silvina Tomassone.
57. AIChE Annual Meeting, Salt Lake City, Utah November, 2007, "Discrete Element Simulation Of The Mixing Process In A Pancoater", A. Dubey (Speaker) B. Chaudhuri, M. S. Tomassone, F. J. Muzzio, contributed talk.
58. AIChE Annual Meeting, Salt Lake City, Utah November, 2007, "An Approach For The Parallelization Of The Discrete Element Code", A. Dubey (Speaker), M. S. Tomassone, F. J. Muzzio, contributed talk, Salt Lake City, Utah.
59. AIChE Annual Meeting, Salt Lake City, Utah November, 2007, "Interparticle Forces in a Supercritical Fluid: A Simulation Study", A. Vishnyakov, Y. Shen, M. S. Tomassone (Speaker), contributed talk.

60. AIChE Annual Meeting, Salt Lake City, November, 2007, "Morphology, Growth And Stability Of Poorly Water Soluble Drug Crystals By The Addition Of Surfactants In Different Solvent Media Using Both An Experimental And Simulations Approach", F. Romanski (Speaker), M. S. Tomassone, contributed talk.
61. AIChE Annual Meeting, Salt Lake City, Utah November, 2007, "Molecular Dynamics Studies On The State Of Dispersion Of Silica Nanoparticles In A Polyethylene Melt In The Presence Of Nonionic Surfactants", Yangyang Shen, Aleksey Vishnyakov, M. S. Tomassone (Speaker), contributed talk.
62. AIChE Annual Meeting, Salth Lake City, Utah November, 2007, "Relation Between Flow And Electrical Properties Of Pharmaceutical Blends", Kalyana Pingali (Speaker), Fernando. J Muzzio, Troy Shinbrot, and M. S. Tomassone, contributed talk.
63. 11th Argentine Congress of Industrial Pharmacy and Biochemistry (SAFYBI), "Pharmaceutical Manufacturing: Past, Present, and Future", August 30, Buenos Aires, Argentina, F.J. Muzzio (Speaker) and M. S. Tomassone, contributed talk.
64. 20th North American Meeting (NAM20) June 21st, 2007, "Heat Transfer in Granular Flow in Rotary Calciners: Experiments and Particle Dynamics Simulations" M. S. Tomassone (Speaker), contributed talk.
65. AIChE Annual Meeting, San Francisco, November, 2006, "Compaction of Pharmaceutical Formulations", M. Llusa (speaker), B. Chaudhuri, M. S. Tomassone, A.M. Faqih, A. Mehrotra, F. J. Muzzio, contributed talk.
66. AIChE Annual Meeting, San Francisco, November, 2006, "Correlating Density Measurements to Flow Behavior of Cohesive Granular Materials, A.M. Faqih (speaker), F. J. Muzzio, B. Chaudhuri, A. Mehrotra, M. S. Tomassone, contributed talk.
67. AIChE Annual Meeting, San Francisco, November, 2006, "A Hydrodynamic Method for the Continuous Production of Nanoparticles", E. Jayjock (speaker), M. S. Tomassone, F. J. Muzzio, contributed talk.
68. AIChE Annual Meeting, San Francisco, November, 2006, "DEM Simulations of "Dry Cohesion" Effects in Powder Compaction", A. Mehrotra (speaker), B. Chaudhuri, A. M. Faqih, M. S. Tomassone, Fernando J. Muzzio, contributed talk.
69. AIChE Annual Meeting, San Francisco, November, 2006, "Stress Distribution in the Avalanching Flow of Cohesive Granular Materials in a Rotating Vessel", B. Chaudhuri (speaker), A. Mehrotra, M. S. Tomassone, contributed talk.
70. AIChE Annual Meeting, San Francisco, November, 2006, " Design and Computational Analysis of Protein Based Nanoscale Biomimetic Actuators", A. Dubey (speaker), M. S. Tomassone, C. Mavroidis, contributed talk.
71. AIChE Annual Meeting, San Francisco, November, 2006, " Effect of Peptizing Agents on Pre-Extruded Pseudoboehmite Powder", Sandrine Rivillon (speaker), M. S. Tomassone, D. Hollobaugh, D. Michalak, J. Li, Y. Chabal, A. W. Chester, contributed talk.
72. AIChE Annual Meeting, San Francisco, November, 2006, "Experimentally Validated Computations of Heat Transfer in Granular Flow in Rotary Calciners", M. S. Tomassone (Speaker) B. Chaudhuri and F. J. Muzzio, contributed talk.
73. AIChE Annual Meeting, Cincinnati, Ohio, November 2005, "Quenching of Growth of Asa Crystal Surfaces by Adsorption of Various Surfactant Molecules Using Molecular Dynamics Simulations", M. S. Tomassone (Speaker), and T. Li, contributed talk.

74. AIChE Annual Meeting, Cincinnati, Ohio, November 2005, "A Method for Predicting Hopper Flow Characteristics of Unconfined Cohesive Powders", A. M. Faqih (Speaker), A. Mehrotra, B. Chaudhuri, M. S. Tomassone, and F. J. Muzzio, contributed talk.
75. AIChE Annual Meeting, Cincinnati, Ohio, November 2005, "Flow-Induced Dilation of Fine Powders in a Rotating Drum", A. M. Faqih (Speaker), B. Chaudhuri, F. J. Muzzio, and M. S. Tomassone, contributed talk.
76. AIChE Annual Meeting, Cincinnati, Ohio, November 2005, "Modeling of Heat Transfer in Granular Flow in Rotating Vessels", B. Chaudhuri (Speaker), F. J. Muzzio, and M. S. Tomassone, contributed talk.
77. AIChE Annual Meeting, Austin, TX, November 2004, "Surface Characterization of Aspirin Crystal Planes using Molecular Dynamics Simulations", M. S. Tomassone (Speaker), and B. Li, contributed talk.
78. AIChE Annual Meeting, Austin, TX, November 2004, "Molecular Dynamics Simulations on Structure and Rheology of Polymer Nanocomposites", M. S. Tomassone, and Y. Shen (Speaker), contributed talk.
79. AIChE Annual Meeting, Austin, TX, November 2004, "Rheology of Avalanches", F. J. Muzzio (Speaker), A. W. Alexander, B. Chaudhuri, A. M. Faqih, and M. S. Tomassone, contributed talk.
80. AIChE Annual Meeting, Austin, TX, November 2004, "Effect of Cohesion on Granular Mixing in the Rotating Drum: Simulations and Experiments", B. Chaudhuri (Speaker), A. Mehrotra, M. S. Tomassone, and F. J. Muzzio, contributed talk.
81. NSTI Bio Nano Conference & Trade Show, March 2004*,"Viral Protein Linear (VPL) Nano-Actuator";* A. Dubey (Speaker), G. Sharma, C. Mavroidis, M. S. Tomassone, K.P. Nikitczuk and M.L. Yarmush, contributed talk.
82. AICHE Annual Meeting, San Francisco, CA, November 2003, "Synergism of Non-Ionic Surfactants", A. Misra and M. S. Tomassone, poster.
83. AICHE Annual Meeting, San Francisco, CA, November 2003, "Numerical Simulations of Cohesive Powder in a Rotating Drum", B. Chaudhuri, M. S. Tomassone, A. W. Alexander, and F.J. Muzzio, poster.
84. AICHE Annual Meeting, San Francisco, CA, November 2003, "Measuring Powder Cohesion and Comparison to Mixing Data", A. W. Alexander (Speaker), M .S. Tomassone, C. Davis, and F. J. Muzzio, contributed talk.
85. AICHE Annual Meeting, San Francisco, CA, November 2003, "Numerical Simulations of Cohesive Powder in a Rotating Drum", B. Chaudhuri (Speaker), M. S. Tomassone, A. W. Alexander, C. Davis, and F.J. Muzzio, contributed talk.
86. AICHE Annual Meeting, Indianapolis, IA, November 2002, "Molecular Dynamics of superspreading", M. S. Tomassone (Speaker), J. Koplik, C. Maldarelli, and A. Couzis, contributed talk.
87. AICHE Annual Meeting, Indianapolis, IA, November 2002, "LDL-retentive substrates: Modulating Atherogenesis at the Nanoscale", E. C. Chnari (Speaker), Y. Shen, M. S. Tomassone, and P. V. Moghe, contributed talk.
88. AICHE Annual Meeting, Reno, Nevada, November 2001, "Molecular Dynamics in Lennard Jones Superspreading Fluids", M. S. Tomassone (Speaker), C. Maldarelli, and A. Couzis, contributed talk.

89. ICCS (International Conference on Conceptual Structures, Stanford University, San Francisco, July 2001, "Surfactants at the Molecular Scale", J. Koplik (Speaker) and M. S. Tomassone, contributed talk.
90. AICHE Annual Meeting, Los Angeles, CA, November 2000 "Exchanging ideas for innovation", "Phase transition of Soluble Surfactants at the Air/Water Interface", M. S. Tomassone (Speaker), contributed talk.
91. 2000 Symposium, Bethlehem, Pennsylvania, 2000, M. S. Tomassone (Speaker), C. Maldarelli, A. Couzis, and J. Koplik, "Molecular Dynamics Simulations of Gaseous/Liquid Phase Transitions of Insoluble Surfactants at a Fluid Interface", contributed talk.
92. 52nd annual meeting of the division of fluid dynamics, APS, New Orleans, 1999, "Molecular Dynamics Simulations of Spreading with Surfactants", J. Koplik (Speaker), S. Mcnamara, M. S. Tomassone, and J. R. Banavar, contributed talk.
93. APS March Meeting, Los Angeles 1998, "Simulations of the Effect of a Stepped Substrate", M. S. Tomassone (Speaker) and J. B., Sokoloff, contributed talk.
94. APS March Meeting, Los Angeles 1998, "Perturbation Theory on the Effect of Sliding on Stepped Substrates", M. S. Tomassone (Speaker), J. Krim, and J. Sokoloff, contributed talk.
95. APS March Meeting, Kansas, March 1997, "Molecular Dynamics Simulations of Sliding Friction for a Xe on a Silver Substrate with defects", M. S. Tomassone (Speaker), J. Krim, and J. Sokoloff, contributed talk.
96. APS March Meeting, St. Louis, March 1996, "Simulations on Phonon Contributions to Friction for Xe/Ag", M. S. Tomassone (Speaker), and J. Krim, contributed talk.
97. APS March Meeting, St. Louis, March 1996, "Electronic Friction for Xe Films Sliding along a Metal Substrate", M. S. Tomassone and A. Widom, poster.
98. APS March Meeting, St. Louis, 1996, "Erosion via Ion-Sputtering: from Pattern Formation to Rough Surfaces", H. Makse (Speaker), R. Cuerno, M. S. Tomassone, and H. E. Stanley, contributed talk.
99. MRS Fall Meeting, Boston, 1996, "Erosion via Ion-Sputtering: from Pattern Formation to Rough Surfaces", R. Cuerno, H. Makse, M. S. Tomassone, and H.E. Stanley, poster.
100. Princeton University, Materials Science Institute Seminar, February 1996, "Model for Erosion via Ion-S4uttering: from Pattern Formation to Rough Surfaces", R. Cuerno, H. Makse (Speaker), and M. S. Tomassone, contributed talk.
101. APS March Meeting, Pittsburg, March 1995, "Fractal Scaling Behavior of Water Flow Patterns in Inhomogeneous Surfaces", M. S. Tomassone (Speaker) and J. Krim, contributed talk.
102. MRS Fall Meeting, Boston, 1995. "Stochastic Model for Ion-Sputtered Systems: from Pattern Formation to Rough Surfaces", H. Makse (Speaker), R. Cuerno, M. S. Tomassone, and H. E. Stanley, contributed talk.
103. STATPHYS 19, Xiamen, China, 1995, "Stochastic Model for Ion-Sputtered Systems: from Pattern Formation to Rough Surfaces", H. Makse, R. Cuerno, M. S. Tomassone, and H. E. Stanley, poster.

G. CHAIRED SESSIONS IN AICHE

AICHE 2023

AICHE Annual Meeting Orlando, FL, Co-Chair of Particle Technology Forum Award Presentations, S. B. Reddy Karri (Chair), Particulate Solid Research, Inc. (PSRI) and Maria Tomassone, Rutgers. Wednesday, November 8, 2023.

AICHE Annual Meeting Orlando, FL, Co-Chair, Particulate Systems: Dynamics and Modeling: Applications, Maria Tomassone, Rutgers (Chair) and William Ketterhagen, (Co-Chair)
Tuesday, November 7, 2023

AICHE 2022

AICHE Annual Conference 2021, Phoenix, AZ, Session Chair of Particulate System Dynamics and Modeling, Maria Tomassone (Chair) in person, November 8th, 2021,

AICHE 2021

AICHE Annual Conference 2021, Session Chair of Particulate System Dynamics and Modeling, Maria Tomassone (Chair) in person, Boston, November 8th, 2021,

AICHE 2020

AICHE Annual Conference 2020, Virtual Conference, Session Co-Chair: Maria Tomassone, Session: Functional Nanoparticles, Virtual Conference, November 16th, 2020

AICHE Annual Conference 2020, Virtual Conference, Session: Engineered Particles Nanostructured Particulate System Characterization, November 17th, 2020,

AICHE 2019

1. Session 03C00 Particulate Systems Dynamics and Modeling: “Discrete and Continuum Approaches”; Tomassone (Chair).
2. Session 03A00 Engineered Particles and Nanostructured Particulate Systems Characterization; Tomassone (Co-chair).
3. Session 03D00 Functional Nanoparticles Tomassone (Co-Chair).

AICHE 2018

4. Session 03C01: “Dynamics and Modeling of Particulate Systems: Discrete and Continuum” Tomassone (Chair).
5. Session 03A01 Characterization, Modeling and Control/Optimization of Micro- and Nano-Structured Particulate Systems. Tomassone (Chair).

AICHE 2017:

6. 03A01 Characterization of Engineered Particles and Nanostructured Particulate Systems M.S. Tomassone (Chair), Mohammad Azad (Co-chair)

AICHE 2013

7. Session 52 Dynamics and Modeling of Particulate Systems II; Tomassone (Chair); Ben Freireich (Co-chair)
8. Session 172 Dynamics and Modeling of Particulate Systems III Ben Freireich(Chair); M.S. Tomassone (Co-chair).

AICHE 2012

9. Session 692 Engineered Composite Particulate Systems for Pharmaceutical Active Ingredients II; M. S. Tomassone (Co-chair) ; Ilgaz Akseli (Chair)
10. Session 143 Functional Nanoparticles and Nanocoatings on Particles III: Tomassone(Co-Chair); Da Deng (Chair)
11. Session 208 Dynamics and Modeling of Particulate Systems II; Tomassone (Chair); Ben Freireich (Co-chair).

AICHE 2011

12. Session 151 Dynamics and Modeling of Particulate Systems II; Tomassone (Co-Chair); Ben Freireich (Chair)
13. Session 172 Dynamics and Modeling of Particles, Crystals and Agglomerates Formation
M. S. Tomassone (Chair); Deliang Shi (Co-Chair)
14. Session 341: Synthesis, Characterization and Modeling of Nanoparticles Systems with Pharmaceutical Applications, M. S. Tomassone (Chair) ; Raj Dave (Co-Chair)

AICHE 2010

15. Session 306: Synthesis, Characterization and Modeling of Nanoparticle Systems with Pharmaceutical Applications: Tomassone (Chair), Ben Freirich (Co-chair)

AICHE 2009

16. Session 345: Synthesis, Characterization and Modeling of Nanoparticle Systems with Pharmaceutical Applications (Tomassone (Chair), Ben Freirich (Co-chair)

AIChE 2008

17. Session 159: Modeling and Scale up of Nanoparticle Processes, Tomassone (Chair)
18. Session 496: Particle Formation Processes From Liquids and Gases ;
Tomassone (Chair)

H. INVITED TALKS

1. Invited Tallk in University of El Salvador: Partículas Janus Para el Suministro Dual de Fármacos Partículas Janus Para el Suministro Dual de Fármacos, Universidad Del Salvador, Departamento de Química y Farmacia, Prof. M. Silvina Tomassone (Speaker), Rutgers University, October 28th, 2021
2. "Optimization and Scale-Up of Dry Catalyst Impregnation: A Combined Simulation and Experimental Approach: Scale up of the Impregnation Process", M. Silvina Tomassone (Speaker), Bill Borghard, Yangyang Shen, Jiao Yang, Noah Dartt, Aman Rastogi, Sai Sasidhar Guduru, Eric Bell, Peter Henley, Tejas Shirshikar, Connor Boland, Rutgers Catalyst Manufacturing Consortium, April 22nd, 2020.
3. RCMC Meeting September 2020 "Discrete Element Method (DEM), Simulations of a Continuous Impregnation Process" Maria Silvina Tomassone (speaker) , Bill Borghard, Yangyang Shen, Noah Dartt and Ashish Kanekanti, Eric Bell, Peter Henley, Nicholas Lepinski, September 22nd, 2020
4. RCMC Meeting April 2021, "Experiments with Double Nozzle Metal Impregnation with Copper, Cobalt and Nickel", Maria Silvina Tomassone (Speaker), Bill Borghard, , Eric Bell, Peter Henley, April 13th, 14th , 2021
5. RCMC Meeting April 2021, "Discrete Element Method Simulations on Continuous Impregnation Processes"., Maria Silvina Tomassone (Speaker), Bill Borghard, Yangyang Shen, Pengfei Xu, Noah Dartt, April 13th, 14th and 15th, 2021
6. RCMC Meeting October 2021 "Experiments of Impregnation with Copper, Cobalt and Nickel (with Two Nozzles", Maria Tomassone (Speaker) , Bill Borghard, Noah Dartt, Joseph Shovlin, Eric Bell, Akhil Hashem, Sean Marino
7. RCMC Meeting October 2021, "Discrete Element Method Simulations on Continuous Impregnation Processes: Tracer Particles Behavior", Maria Tomassone (Speaker), Bill Borghard, Yangyang Shen, Pengfei Xu, Noah Dartt, October 19th 2021.
8. RCMC Meeting April 2022, Bimetallic and High concentration experiments with Cobalt and Copper on Al2O3 & TiO2, ", Maria Tomassone (Speaker), Bill Borghard, Yangyang Shen, Kuang Liu Mohammad Abd Elrahman Akhil Hashem, Yiwei Shao, Dr. Bill Borghard, RCMC, Rutgers, April 27th 2022.
9. RCMC Meeting April 2022, "Machine Learning applied to Continuous Impregnation", Tomassone Maria (speaker), Yangyang Shen, Kuang Liu Mohammad Abd Elrahman Akhil Hashem, Yiwei Shao, Dr. Bill Borghard, RCMC, Rutgers, April 27th 2022.
10. RCMC Meeting October 2022 "Bimetallic experiments with Cobalt and Copper on Al2O3 & TiO2 with Intermediate Drying", Tomassone Maria (speaker), Yangyang Shen, Kuang Liu Mohammad Abd Elrahman Akhil Hashem, Yiwei Shao, Dr. Bill Borghard, RCMC, Rutgers, October 12th 2022.
11. RCMC Meeting October 2022 ,"Discrete Element Method Simulations of Batch Impregnation with Baffles in Cylindrical Vessels", Tomassone Maria (speaker), Yangyang Shen, Kuang Liu Mohammad Abd Elrahman Akhil Hashem, Yiwei Shao, Dr. Bill Borghard, RCMC, Rutgers, October 12th 2022.
12. RCMC Meeting April 2023, "Impregnation Experiments with Cobalt, Copper and Molybdenum on Al2O3 & TiO2", Maria Tomassone (Speaker), Mohammad Abd Elrahman, Akhil Hashem, Yiwei Shao, April 26th, 2023.
13. RCMC Meeting April 2023 , "DEM Simulations of Impregnation with Baffles in Cylindrical Vessels", **Maria Tomassone (Speaker),** Samiyah Siddiqui, April 26th, 2023
14. RCMC Meeting October 2023 , "Study of the Dependence of Froude Number on Fill Level on batch impregnation experiments with Cobalt on Al2O3" , **Maria Tomassone (Speaker),** Gibson Nguyen, Shubham Naik, Kaustubh Vilas Wani, Prof. Georgios Tsilomelekis., October 18th, 2023.
15. RCMC Meeting October 2023 , "DEM Simulations Impregnation in Cylindrical Vessels: Systematic Study of Froude Number", Maria Tomassone (Speaker), Samiyah Siddiqui, October 18th, 2023.
16. Rutgers Energy Institute: Women in Energy: Networking night; "My own experience with Energy Research and Networking", Rutgers University. (April 4th, 2018)
17. Women Entrepreneurship Workshop, "Paving the Way for STEM Women Entrepreneurs"; Rutgers University, March 9th, 2018

18. Columbia University, Department of Chemical Engineering, Molecular Simulation Studies of the Rheological Properties of Polymer Nanoparticle Composites. (November 2013).
19. City College of New York (March 29th 2011) Molecular Simulation Studies of the Rheological Properties of Polymer Nanoparticle Composites
20. University of Delaware (October 28th 2011) Rheology of Polymer Nanoparticle Composites: A computational Approach.
21. Tennessee Tech University (Nov 15th 2011) Molecular Simulation Studies of Polymer Nanocomposites: A coarse grain approach.
22. AIChE Annual Meeting, Philadelphia, November 2008, Surface Tension in Pharmaceutical Manufacturing: An Overview and Two Case Studies **(Plenary Talk Invited) M. Silvina Tomassone (speaker)**, F. J. Muzzio Carlos Velázguez, Frank Romanski, Marcos Llisa, Wusheng Zhu
23. M. S. Tomassone, "Using Molecular Simulations to Understand Morphology, Growth and Deagglomeration of Nanoparticles", Purdue University: Department of Industrial and Physical Pharmacy, (School of Pharmacy and Pharmaceutical Sciences), May 22nd, 2007
24. M. S. Tomassone, "Dilation, Rheology and Heat Transfer in Flowing Cohesive Powders", Lehigh University, Department of Chemical and Biochemical Engineering, November 29th 2006.
25. M. S. Tomassone, "Molecular Dynamics Studies of Viral Protein Linear Nanoactuators", 4th International Symposium on Nanomanufacturing, Massachussetts Instititue of Technology (MIT), Mechanical Engineering Department, November 3rd, 2006.
26. M. S. Tomassone, "Molecular Dynamics Design of Pharmaceutical Particles", Annual Pharmaceutical Technology Meeting, Holiday Inn, Somerset, NJ, Sponsored by the Institute of Validation Technology, June 12th, 2006.
27. M. S. Tomassone, "Getting Started with Grants: An Assistant Professor's Perspective", Rutgers University: Workshop on Grantmanship, Robeson Center, April 20th 2006.
28. M. S. Tomassone, "Modeling Mixing of Cohesive Materials: A Route to Predictive Process Understanding", University of Puerto Rico (UPRM), October 20th, 2005.
29. M. S. Tomassone, "Flow-Induced Dilation of Fine Powders in a Rotating Drum", Pfizer Pharmaceuticals; November 2005.
30. M. S. Tomassone, "Molecular Dynamics Simulations for the Study of Nanosystems", Rutgers University, Department of Chemical and Biochemical Engineering, November 2004.
31. M. S. Tomassone, "A Molecular Dynamics Study of Surfactant Facilitated Spreading of Droplets on Hydrophobic Substrates", Fluid Dynamics Seminars, NJIT, Department of Mathematics, October 11, 2004.
32. M. S. Tomassone, "Surfactant assisted Spreading on Hydrophobic Surfaces", TRI Princeton, Princeton, NJ, April 4th, 2002.
33. M. S. Tomassone, "Using Molecular Dynamics to Understand Phase Behavior of Surfactants and Spreading of Fluids", Exxon-Mobil, NJ, April 29th, 2002.
34. M. S. Tomassone, "Molecular Dynamics Simulations of Gaseous-Liquid Transitions of Soluble and Insoluble Surfactants at a Fluid Interface", Pharmacia-Up John, May 16th, 2002.
35. M. S. Tomassone, "Phase Transitions of Surfactant Molecules at the Air/Water Interface", Merck, West Point, August, 2002.

36. M. S. Tomassone, "A New Approach for the Continuous Production of Nanoparticles: Flow Induced Phase Inversion", Rahway, NJ, July, 2002.
37. M. S. Tomassone, "Continuous Manufacturing of Nanoparticles: Flow Induced Phase Inversion", Merck, West Point, PA, July, 2002.
38. M. S. Tomassone, "Molecular Dynamics Methods for Understanding Flow and Segregation of Needle Shape Particles", Pfizer, Morris Plane, NJ, October 2002.
39. M. S. Tomassone, "Molecules, Surfaces and Droplets: "Using Molecular Dynamics to Understand Phase Behavior of Surfactants and Spreading of Liquids". Department of Chemical and Biochemical Engineering, Rutgers, Piscataway, March 2001.
40. M. S. Tomassone, "Molecular Dynamics Simulations Approaches For Particle Engineering", Department of Chemical and Biochemical Engineering, Rutgers, Piscataway, May 2001.
41. M. S. Tomassone, "Molecular Dynamics Approaches to Understand the Behavior of Nanoparticles adsorbed on Surfaces", Pharmaceutical Engineering Open House: Department of Chemical and Biochemical Engineering, Rutgers, Piscataway, NJ, October 2001.
42. M. S. Tomassone, "Phase Transitions of Surfactant Molecules at the Air/Water Interface", Levich Institute, Seminar Series, City College of New York, NY, March 2000.

I. SYNERGISTIC & EDUCATIONAL ACTIVITIES

1999-Present	Member, American Institute of Chemical Engineering (AIChE)
2001- Present	Advisor to undergraduate students in summer research
2001- Present	Fellow of Douglass Center for the Rutgers Women in Math Sci. & Eng.
2001-Present	Technical Panel Reviewer National Science Foundation
2002- Present	Chair/Co-Chair in Topical Confer. (AIChE, Amer. Phy. Society APS)
2003-Present	Manuscript Reviewer for: Physical Review Letters, Physical Review A, B, E; Powder Technology, Langmuir, Nature Materials, AICHE Journal; Journal of Pharmaceutical Innovation, European J. of Pharm, Chem. Eng. Science.
2004-2005	Seminar Series Coordinator RU Dept. of Chem. and Biochemical Engineering
2007-2010	Member of the University Senate- Faculty Affairs and Personnel -
2006-Present	Associate Editorial Board Member EBM, Experimental Biology and Medicine
2006-2014	Active participant of the Engineering Research Center (ERC) at Rutgers on Organic Composites for Pharmaceutical Engineering
2005-Present	Session Chair/Co-Chair, Amer. Inst. of Chemical Eng (AICHE) Meeting
2007-Present	Member of AICHE Nanoparticle Synthesis and Characterization division
2009- 2012	Member, Graduate Admissions Committee, CBE Dept., Rutgers
2007-2012	Director of Center of Comput. Lab. at the Chem. Eng. Dept., Rutgers
2007-2011	Elected Vice Chair of Area 3 Session in AICHE Particle Technology Forum
2008-2012	AICHE Undergraduate Student Advisor Chemical and Biochemical Engineering
2008-2010	Member of the University Senate in the division of "Faculty Affairs and Personnel Committee"
2008-2012	ABET Coordinator
2008-2013	AICHE ChemE Car advisor
2015-2017	Member of the department's Ph.D. qualifying exam committee

2016-Present Member of the School of Engineering Rules of Procedure Committee
2022-2024 Elected Vice Chair of the AICHE Particle Technology (PTF)
2024-2026 Elected Chair of AICHE Particle Technology Forum (PTF) 2024 to 2026
2021-2023 Elected Vice Chair of Area 3C AICHE Particle Technology (PTF)
2023-2025 Elected Chair Area 3C AICHE Particle Technology Forum (PTF)

2022-2026 Member of the Executive Committee AICHE Particle Technology Forum (PTF)

Other service to the Profession: Dr. Tomassone has served as a chair or co-chair of several symposia and sessions at annual meetings of national and international conferences, including American Institute of Chemical Engineers (AIChE), the Materials Research Society (MRS), the American Physical Society (APS) and the North American Catalysis Society. She and her group have presented approximately one-hundred presentations at the meetings of these societies.

She has served as a reviewer for the Nanomanufacturing, Bioengineering and Multiparticle Flow divisions of the National Science Foundation. She reviewed grants for PRF, DOE and ETHZ (Eidgenossiche Technische Hochschule Zurich, Swiss Federal Institute of Technology). She has also been a reviewer of manuscripts for the Journal of Chemical Physics, Journal of Physical Chemistry, American Journal of Physics, and Physical Review B, Phyical Review Letters, Langmuir, Nature, Nature Nanotechnology, Chemical Engineering Science, Powder Technology and Physics of Fluids, International Journal of Pharmaceutics.

K. COLLABORATORS AND OTHER AFFILIATIONS

Collaborators: Robert Pfeffer (NJIT); Martin Yarmush (Biomedical Engineering, Rutgers University); Prabhas Moghe (Biomedical Engineering, Rutgers University); Kathryn Uhrich (Chemistry, Rutgers); Edward W. Castner (Chemistry, Rutgers); Aleksey Vyshniakov (Chemical Engineering, Rutgers); Madelaine Torres Lugo (Chemical Engineering, UPRM), Carlos Rinaldi (Chemical Engineering, UPRM); Jing Li (Chemistry, Rutgers); Fernando Muzzio (Chem. and Biochem. Eng., Rutgers); Rajesh Dave (NJIT); Charles Maldarelli (Chemical Engineering, CCNY); Hernan Makse (Physics, CCNY); Dinos Mavroidis (Mechanical Engineering, Northeastern University); Fotios Papadimitrakopulous (Chemistry, University of Connecticut); William Borghard (RCMC), Georgios Tsilomelekis (RCMC), Fernando Muzzio (C-SOPS)

Graduate and Postdoctoral Advisors
Krim, Jacqueline (Northeastern University, MA), Graduate Advisor
Joel Koplik and Charles Maldarelli (City College of New York, NY Post-Doc Advisors)

Thesis Advisor and Postgraduate Scholar Sponsor
8 Graduated Ph.D. Students:

1. Amit Mehrotra ((Co-supervised with Prof. F. J. Muzzio), Ph.D. in May 2007
2. Mobeen A. Faqih (Co-supervised with Prof. F. J. Muzzio), Ph.D. in May 2006
3. Yangyang Shen, Ph. D. May 2008
4. Eric Jayjock, (Co-supervised with Prof. Muzzio) Ph.D.2008.
5. Atul Dubey Ph.D. in May 2008
6. Frank Romanski, PhD. May 2011
7. Michael Tomasini Ph.D., May 2012
8. Jennifer Winkler, Ph.D. May 2016
9. Kurt Smith, Ph. D. September 2020

Post Doctoral Researches: Kuang Liu Co advised with Hernan Makse (City College of NY)

Current Master Students: (2) Fenilkumar Patel, Ian Bauman (2024)

Former Undergraduate students: Jamar Tyndale, Benjamin Reinecke, Melissa De Mattia, Jennifer Yam, David Brain, Swarup Sha, Annelie Oswald, Christopher Rassmusen, Mio Shie, Chistopher Papamitrou, Dion Zhang, Ian Dill, Ian Campbell, Emanuel Scoullos, Manoj Thakore, Joy Ann Coulborne, Jonathan Gerszberg, Ashish Shah, Joseph Greenberg, Franklin Bettencourt, Ramon Pena, Brian Tuohy, Kimberley Ulaky, Mathew Rodis, Ted Wang, James Mullen, Tatsat Vyas, Rebecca Kizner, Felix Milman, David Michalek.

Other Former Graduate Students:
Kenneth Gwanmesia 2008-2010
Divya Jonnavittula 2008-2010

Former Post Doctoral Researchers:

1. Yangyang Shen Ph. D. Rutgers University, May 2008- 2020
2. Jiao Yang, Ph. D. in Physics & Mineral Processing, School of Chemical Engineering & Technology, China University of Mining and Technology (2014-2019)
3. Jing Liu, Ph. D. in Physical Chemistry, University of China, (2013
4. Michael Clark, Ph.D. Columbia University, 2012.
5. Bodhisattwa Chaudhuri, Ph.D. Mechanical Engineering, New Jersey Institute of Technology, currently Assistant professor at University of Connecticut
6. Mukundan Devadas, Ph.D. Chem. Eng.,ETHZ), Zurich, Switzerland, 2006.
7. Atul Dubey, Ph.D. Rutgers University, 2007.

8. Frank Romanski, Ph. D. Chemical Engineering, Rutgers University, 2011.
9. Charles Radeke, Ph. D. Math. Technical Univ. of Freiberg, Freiberg, 2006.
10. Aleksey Vishnyakov, Ph. D. Chemistry, St. Petersburg Univ., Russia,1999.
11. Wusheng Zhu, Ph.D. Chemistry, Peking University China,1996.
12. Tao Li, Ph.D. Chemical Engineering, University of South Carolina, 2004-2006.
13. Bo Li, Ph. D. Chemical Engineering, University of Cincinnati 2001, 2003-2004.

Advising on Ph.D. Thesis Committees

Member for 23 Ph.D. Thesis Committees in Chemical Engineering & Biosciences

1. Igor Barishev (City College of the City of New York Joel Koplik's student)
2. Marcos LLusa (F. Muzzio's student)
3. Atul Dubey - Rutgers University
4. Paloma Pimenta - Rutgers University (F. Muzzio's student)
5. Amit Mehrotra - Rutgers University
6. Mobeen Faqih - Rutgers University
7. Benjamin Lee - Rutgers University (Co-supervised with Prof. E. Castner)
8. Gaurav Sharma - Boston University (Dinos Mavroidis' student)
9. Justin Lacombe - Rutgers University (F. Muzzio's student)
10. Tom William Cochran - Rutgers University (Yee Chiew's student)
11. Joseph Nti-Gabayah - Rutgers University (Yee Chiew's student)
12. Rui Zhang - City College of the City University of New York
13. Yangyang Shen - Rutgers University
14. Rajesh Goyal - City College of the City University of New York
15. Francis Romanski - Rutgers University
16. Michael Tomasini - Rutgers University
17. Jennifer Winkler - Rutgers University
18. Michael Clark - Columbia University – (Sanat Kumar's student)
19. Christopher Dobranski – Rutgers University (Nina Shapley's student)
20. Ghosh, Indrajit – Pharmacy Department Rutgers University Minko's student.
21. Kapil Deshpande - Rutgers University (Nina Shapley's student)
22. Chi Han Huang - Rutgers University
23. Tianya Yin – Rutgers University

L. COURSES TAUGHT

1. "Transport Phenomena I: Fluid Mechanics", 14:155:303
2. "Transport Phenomena II: Heat and Mass Transfer", 14:155:304
3. "Introduction to Nanomaterials Science and Engineering: Module in Molecular Simulations" 14:150:330
4. "Advanced Transport Phenomena I: Fluid Mechanics", 16:155: 501
5. "Advanced Transport Phenomena II Mass and Heat Transfer" 155:502
6. "Statistical Methods and Design of Experiments" 16:155: 547
7. "Computational Methods for Pharmaceutical Nanomaterials" 16:155:549
8. "Nano and Microsystems Biointerfaces": Module for Methods for Manufacturing Nanoparticles 16:125:58

9. Biointerfaces: 16:125 Module for Molecular Simulations

M. GRANTS

--**NJ RUTGERS CONSORTIUM FOR CATALYST MANUFACTURING** 1/1/20 to 12/31/2021 Impregnation of Particles with Metal Solutions Rutgers Catalyst Manufacturing Consortium Tomassone (PI) $200,000

-**NJ RUTGERS CONSORTIUM FOR CATALYST MANUFACTURING** 01/1/22 to 12/31/23 Impregnation of Particles with Metal Solutions Rutgers Catalyst Manufacturing Consortium Tomassone (PI) $200,000

-**NJ RUTGERS CONSORTIUM FOR CATALYST MANUFACTURING** 01/1/24 to 12/31/24 Impregnation of Particles with Metal Solutions Rutgers Catalyst Manufacturing Consortium Tomassone (PI) $200,000

- Chinese National Science Foundation Tomassone (PI): Amount: $110,000 from 11/1/2019 to 10/31/ 2021. (1 Post-doctoral Funding for 2 years). Title of Research: "Computational Fluid Dynamics and Discrete Element Methods (DEM) Experiments and Simulations"; Dates for the stay in the US: 11/02/2018 to 11 /01/2020

- China Scholarship Council. Tomassone (PI) "Impregnation of Catalytic Materials Using Viscous Metal Solutions: Experiments and Simulations"
Amount: $56,200 from 9/30/2017 to 10/1/2018 (1 Post-doctoral Funding for 1 year)

-IPRD, LLC Group Tomassone (PI) $12,915 1/17/2018- 6/29/2018
Thin Polymeric Films for Prevention of Skin Wrinkles"

-DOE George McDonald Foundation $1,000 Non Restricted Gift award

-**NJ RUTGERS CONSORTIUM FOR CATALYST MANUFACTURING** Tomassone (PI) 09/1/17- 8/31/18
Title: Impregnation of Alumina Powders
Goals: This grant funds research on experimental and particle computational studies on the dry impregnation of catalysts in industrial catalyst preparation
Role: PI $45,000

-**NSF SBIR SECO** Tomassone (PI) $200,000 10/1/16-3/31/17
SBIR Phase II: Enzyme-based Magnetic Catalysts for Active Pharmaceutical Intermediates (APIs) Manufacturing Title: Assessment of the stability of ZYMtronix magnetic materials during storage and biocatalytic processes
Role: PI (Rutgers) $ 70,000

-**NJ RUTGERS CONSORTIUM FOR CATALYST MANUFACTURING** Tomassone (PI) 09/1/16- 8/31/17
Title: Impregnation of Alumina Powders

Goals: This grant funds research on experimental and particle computational studies on the dry impregnation of catalysts in industrial catalyst preparation
Role: PI $45,000

NSF CMMI 1235301 PI (Tomassone) $396,364 7/1/2012 – 6/30/2015
Title: Engineered Anisotropic Biphasic Nanoparticles for Bio-Therapeutic and Pharmaceutical Technologies. The key goal of this work is to create novel biodegradable and biocompatible anisotropic biphasic nano- particles for large scale production, capable of dual compartmentalization and incorporation of two or more therapeutic drugs with staggered release profiles. Five papers and 10 conference presentations resulted from this study.
Role: PI

AEROSOL THERAPEUTICS LLC $116,000 07/1/11 – 6/30/12
Title Experimental Freeze Drying Techniques Applied to Pharmaceutical Nanosuspensions
Role: PI (Tomassone)

ERC Engineering Research Center (ERC) C-SOC Center for Organic Structured Composites $15,000,000 7/1/2005 -6/30/2017
Amount Received For Tomassone: $566,069 From 2008-2014
Project A1: Particle Formation and Formation of Dilute Phase Slurries
Project A7: Modeling and Validation of Material Properties of Crystalline Particles: formation and stability under stress
Fiscal Year 2008= $47,822
Fiscal Year 2009= $87,376
Fiscal Year 2010= $88,294
Fiscal Year 2011= $92,024
Fiscal Year 2012= $92,173
Fiscal Year 2013=$102,638
Fiscal Year 2014= $98,742

ERC Funding from 2008-2014= $566,069

NSF CBET 00553819
Title: Spatial and Temporal Behavior of Flowing Cohesive Powders. 05/01/06– 04/30/11
Total Award Amount: $ 240,000
Role: PI Tomassone.

CMMI 0506722 NIRT: Environmentally Benign Deagglomeration and Mixing of Nanoparticles; 7/29/2005-8/1/2009; $1,707,424. This award supported multidisciplinary research at Rutgers, NJIT and Princeton. Ten papers and nine conference talks/proceedings resulted from this study.
Role: Co-PI: Tomassone

2008 Board of Trustees Fellowship for Scholarly Excellence $2,000

BES 0609117 NIRT: Magnetically Active Nanoparticles for Cancer Treatment; (7/19/2007-8/1/2012); $1,420,715. This NIRT award supported a multidisciplinary research team at Rutgers and University of Mayaguez, Puerto Rico. Seven journal publications and ten presentations resulted from this study.
Role: Co-PI

NSF-NIH IGERT 0506722 Muzzio(PI) 08/1/2005 – 07/31/2012
TITLE: IGERT on Nanopharmaceutical Engineering and Science $3.4MM Co-PI (Tomassone)
Goals: This training program focuses on research, education, and development of PhD trainees along an integrative curriculum and research paradigm for developing computational and experimental methods for
nanostructured pharmaceutical materials.
Role: Co-PI

-NJ RUTGERS CONSORTIUM FOR CATALYST MANUFACTURING Tomassone (PI) 09/10/15- 8/31/16 $45,000
Title: Impregnation of Alumina Powders
Goals: This grant funds research on experimental and particle computational studies on the dry impregnation of catalysts in industrial catalyst preparation
Role: PI

-NJ RUTGERS CONSORTIUM FOR CATALYST MANUFACTURING Tomassone (PI) 09/10/14- 8/31/15 $45,000
Title: Impregnation of Alumina Powders
Goals: This grant funds research on experimental and particle computational studies on the dry impregnation of catalysts in industrial catalyst preparation
Role: PI
-NJ RUTGERS CONSORTIUM FOR CATALYST MANUFACTURING Tomassone (PI) 09/10/13- 8/31/14 $45,000
Title: Impregnation of Alumina Powders
Goals: This grant funds research on experimental and particle computational studies on the dry impregnation of catalysts in industrial catalyst preparation
Role: PI
NJ RUTGERS CONSORTIUM FOR CATALYST MANUFACTURING Tomassone (PI) 09/10/12- 8/31/13 $35,000
Title: Impregnation of Alumina Powders
Goals: This grant funds research on experimental and particle computational studies on the dry impregnation of catalysts in industrial catalyst preparation
Role: PI
NJ RUTGERS CONSORTIUM FOR CATALYST MANUFACTURING Tomassone (PI) 09/10/11- 8/31/12 $35,000
Title: Impregnation of Alumina Powders

Goals: This grant funds research on experimental and particle computational studies on the dry impregnation of catalysts in industrial catalyst preparation
Role: PI

NJ RUTGERS CONSORTIUM FOR CATALYST MANUFACTURING Tomassone (PI) 09/10/10- 8/31/11 $35,000
Title: Impregnation of Alumina Powders
Goals: This grant funds research on experimental and particle computational studies on the dry impregnation of catalysts in industrial catalyst preparation
Role: PI

NJ RUTGERS CONSORTIUM FOR CATALYST MANUFACTURING Tomassone (PI) 09/10/09- 8/31/10 $35,000
Title: Impregnation of Alumina Powders
Goals: This grant funds research on experimental and particle computational studies on the dry impregnation of catalysts in industrial catalyst preparation
Role: PI

NJ RUTGERS CONSORTIUM FOR CATALYST MANUFACTURING Tomassone (PI) 09/10/08- 8/31/09 $35,000
Title: Impregnation of Alumina Powders
Goals: This grant funds research on experimental and particle computational studies on the dry impregnation of catalysts in industrial catalyst preparation
Role: PI

Current Grants

NSF 1828332 MRI: Acquisition of a High Resolution X Ray Computed Tomography Instrument for multiuser Imaging Facility; 9/1/2019 to 8/31/2022 $399,969
Role: Co-PI

-NJ RUTGERS CATALYSIS MANUFACTURING CONSORTIUM Tomassone: PI
08/31/17- 9/30/20
Title: Impregnation of Alumina Powders
Goals: This grant funds research on experimental and particle computational studies on the dry impregnation of catalysts in industrial catalyst preparation
Amount: $110,000
Role: PI