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### Books and Book Chapter:

- Jana, S.C., Du, L. "Highly-filled graphite-polymer composites: Synthesis, processing, and characterization." In Graphene and Graphene-Based Nanocomposites, Prithu Mukhopadhyay and Rakesh Gupta (Ed.), Taylor and Francis. In press.
- Jimenez, G.A., Lee, B.J., Jana, S.C., "Nanoparticles and Polymer Nanocomposites" Chapter 4 in Nanoscale Multifunctional Materials: Science and Applications, Sharmila Mukhopadhyay (Ed.), Wiley, ISBN: 978-0-470-50891-6, October 2011.
- Gunes, I.S., Jana, S.C., "Chemical and Engineering Aspects of Morphology Development and Processing of Multiphase Polymer Blend Nanocomposites" Chapter 8 in Encyclopedia of Polymer Blends, Volume 2, Avraam Isayev (Ed.), Wiley-VCH Publishers, ISBN: 978-3-527-31930-5, November 2011.
- Gunes, I.S., Jana, S.C., "Biomedical applications of shape memory polymers and their nanocomposites", in Polymeric Biomaterials, Vol II: Medicinal and Pharmaceutical Applications of Polymers, Dumitriu, S. (Ed.), CRC Press, 2010 (in review).
- Gunes, I.S., Jung, C.D., Jana, S.C., "Evolution of non-linear rheology and network formation during thermoplastic polyurethane polymerization and its relationship to reaction kinetics, phase separation, and mixing", Ch. 3 in "Non-linear Dynamics with Polymers", Pojman, J., Miyata, Q.T. (Ed.), 2009 (in press).
- Gunes, I. S., Jana, S.C., "Permeability and Water Uptake Actuation of Shape Memory Polyurethane Nanocomposites: Materials, Processing, Modeling, and Applications", pp. 41-72, Chapter 3 in *Barrier Properties of Polymer Clay Nanocomposites*, ISBN: 978-1-60876-021-3, V. Mittal (Ed), Nova Science Publishers, 2009
- Gunes, I.S., Jana, S.C., "Shape Memory Polymers and Their Nanocomposites" In: Kar KK, editor. *Advanced Composites*, Singapore: Pan Stanford Publishing, 2009 (Chapter 1) (in press)

- Jana, S.C., "Clay Nanocomposites Of Polyurethanes And Epoxies: Preparation Methods And Properties", Chapter 9 in *Processing and Properties of Nanocomposites*, ISBN 978-981-270-390-3, Advani, S.G. (Ed), World Scientific, Published December 2006.

## Commissioned theme articles

**Jana, S.C. The changing landscape of polymer research. *Plastics Engineering*, July/August 2017, 73 (3), 50-52. Published as a commissioned article to celebrate the 75<sup>th</sup> anniversary of the Society of Plastics Engineers.**

## Editorials

Our Journey, Our Future. Editorial. *Polym Eng Sci*. 2020;60:877–878, DOI: 10.1002/pen.25415

Our Journey, Our Future. Editorial. *Polymer Composites*. 2020;41:1699–1700, DOI: 10.1002/pc.25626.

Our Journey, Our Future. Editorial. *J Vinyl Addit Technol*. 2020;26:111–112, DOI: 10.1002/vnl.21772.

## Publications in Refereed Journals

*Google scholar citations~7301, h-index: 42 (as of December 7, 2020)*

### Top 10 cited articles:

Park, J.H., Jana, S.C., 2003 Mechanism of exfoliation of nanoclay particles in epoxy-clay nanocomposites. *Macromolecules*, **36**(8), 2758-2768. **(412 citations)**

Randall, J. P., Meador, M. A. B., Jana, S. C\*. 2011 Tailoring mechanical properties of aerogels for aerospace applications. *ACS Appl. Mater. Interfaces*, 3, 613-626 **(360 citations)**

Park, J.H., Jana, S.C., 2003 The relationship between nano- and micro-structures and mechanical properties in PMMA-epoxy-nanoclay composites. *Polymer*, 44(7), 2091-2100. **(295 citations)**

Jana, S.C., Jain, S. 2001 Dispersion of nanofillers in high performance polymers using reactive solvents as processing aids. *Polymer*, **42**(16), 6897-6905. **(264 citations)**

Ottino, J.M., Muzzio, F.J., Tjahjadi, M., Franjione, J., Jana, S.C., Kusch, H.A. 1992 Chaos, symmetry, and self-similarity: exploiting order and disorder in mixing processes. *Science*, **257**, 754-760. **(236 citations)**

Gunes, I.S., Cao, F., Jimenez, G., Jana, S.C. 2008 Evaluation of nanoparticulate fillers for development of shape memory polymer nanocomposites. *Polymer*, 49, 2223–2234 **(233 citations)**

Gunes, S., Jana, S.C., 2008 Shape memory polymers and their nanocomposites: A review of science and technology of new multifunctional materials. *J. Nanosci. Nanotech.* 8, 1616-1637. **(206 citations)**

Cao, F., Jana, S.C., 2007 Nanoclay-tethered shape memory polyurethane nanocomposites. *Polymer*, 48(13), 3790-3800. **(208 citations)**

Jana, S.C., Metcalfe, G., Ottino, J.M. 1994 Experimental and computational studies of mixing in complex Stokes flows: The vortex mixing flow and multicellular cavity flows. *Journal of Fluid Mechanics*, **269**, 199-246. **(200 citations)**

Pattanayak, A., Jana, S.C., 2005 Synthesis of thermoplastic polyurethane nanocomposites of reactive clay by bulk polymerization methods. *Polymer*, 46(10), 3275-3288. **(200 citations)**

### **Complete list of publications:**

1. Kulkarni, A., Jana, S.C. Surfactant-Free Syndiotactic Polystyrene Aerogel Foams Via Pickering Emulsion. *Polymer*, <https://doi.org/10.1016/j.polymer.2020.123125>.
2. Lin, W-H, Jana, S.C. Analysis of Porous Structures of Cellulose Aerogel Monoliths And Microparticles For Drug Delivery. *Microporous and Mesoporous Materials*, 2021, 310, 110625(1-12). <https://doi.org/10.1016/j.micromeso.2020.110625>.
3. Raut, P.; Yuan, S.; Miyoshi, T.; Jana, S.C., Effects Of Surface Area And Porosity On Behavior Of IL Molecules In Meso And Macroporous Polymeric Networks. *Polymer*, 211 (2020) 123081, 1-10. <https://doi.org/10.1016/j.polymer.2020.123081>.

4. Chan, Z.; Jana, S.C., Solid State Polymer Ionogel Electrolyte for Use in Li-ion Batteries. *SPE Polymers*, 2020, 1, 55-65, DOI: 10.1002/pls2.10016.
5. Yao, Y., Joo, P., Jana, S.C. A Surfactant-Free Microfluidic Process For Fabrication Of Multi-Hollow Polyimide Aerogel Particles. Invited special issue article in Honor of Professor Musa Kamal and Pierre Carreau. *Int. Polym. Proc.*, XXXV 2020, 5, 481–492. DOI 10.3139/217.3989.
6. Zhan, C., Jana, S.C. Shrinkage Reduced Polyimide-Graphene Oxide Composite Aerogel For Oil Absorption. *Microporous and Mesoporous Materials*, 2020, 307, 110501 (1-9). doi.org/10.1016/j.micromeso.2020.110501.
7. Ghosh, M., Jana, S.C. Fabrication of hollow and porous tin-doped indium oxide nanofibers and microtubes via a gas jet fiber spinning process. *Materials* 2020, 13, 1539; doi:10.3390/ma13071539.
8. Niknezhad, S., Jana, S.C. Bi-component nanofibers from core-shell nozzle in gas jet spinning process. *J. Appl. Polym. Sci.* 2020, 137, 48901. DOI: 10.1002/app.48901.
9. Teo, N., Jin, C., Kulkarni, A., Jana, S.C. Continuous fabrication of core-shell aerogel microparticles using microfluidic flows. *Journal of Colloid and Interface Science*, 561, 2020, 772–781. DOI: 10.1016/j.jcis.2019.11.053.
10. Mawhinney, K.; Jana, S.C. Design of emulsion-templated mesoporous-macroporous polyurea gels and aerogels. *ACS Appl. Polym. Mater.* 2019, 1, 11, 3115-3129. doi.org/10.1021/acsapm.9b00762
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12. Quade, D., Jana, S., McCorkle, L The influence of thin film adhesives in pullout tests between nickel-titanium shape memory alloy and carbon fiber reinforced polymer matrix composites. *Composites Part B*, 176, 107321 (2019) [10.1016/j.compositesb.2019.107321](https://doi.org/10.1016/j.compositesb.2019.107321).
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14. Alrashed, M.A., Soucek, M.D., Jana, S.C. 2019 Role of graphene oxide and functionalized graphene oxide in protective hybrid coatings. *Prog. Org. Coatings*, 134, 197-208. doi.org/10.1016/j.porgcoat.2019.04.057.
15. Quade, D.J., Jana, S.C., Morscher, G.N., Kanaan, M., McCorkle, L. 2019 The effect of thin film adhesives on mode II interlaminar fracture toughness in carbon fiber composites

with shape memory alloy inserts. *Mechanics Of Materials*, 131, 22-32. DOI: 10.1016/j.mechmat.2019.01.002.

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19. Kulkarni, A., Pugh, C., Jana, S.C., Wims, D.T., Gawad, A.A. 2019 Crosslinking of SBR compounds for tire tread using benzocyclobutene chemistry. Invited article for the Frontier Issue, *Rubber Chem. Technol.*, January-March 2019, 92 (1), 25-42, DOI:10.5254/rct.18.81512.
20. Alrashed, M., Niknezhad, S., Jana, S.C. 2019 Mechanism and factors influencing formation and stability of chitosan/lignosulfonate nanoparticles. Invited article for a special issue in honor of Professor Hatsuo Ishida *Macromol. Chem. Phys*, 220 (1), DOI:10.1002/macp.2018003381800338.
21. Quade, D., Jana, S., Morscher, G., Kannan, M., McCorkle, L. 2018 The effects of fiber orientation and adhesives on tensile properties of carbon fiber reinforced polymer matrix composite with embedded nickel-titanium shape memory alloys. *Composites, Part A: Applied Science and Manufacturing*, 114, 269-277, DOI:10.1016/j.compositesa.2018.08.019.
22. Teo, N., Gu, Z., Jana, S.C. 2018 Polyimide-based aerogel foams via emulsion-templating. *Polymer*, 157, 95-102. <https://doi.org/10.1016/j.polymer.2018.10.030>
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