

Recent Journal Publications

Note that CoMFRE affiliates are identified by **bold** names.

- Aliseda, A., and **T.J. Heindel**, “X-ray flow visualization in multiphase flows,” *Annual Review of Fluid Mechanics*, 53:543-567, 2021. <https://doi.org/10.1146/annurev-fluid-010719-060201>
- Alm eras, E., F. Risso, O. Masbernat, and **R.O. Fox**, “Statistics of velocity fluctuations in a homogeneous liquid fluidized bed,” *Physical Review Fluids* **6**, 034301, 2021. <https://doi.org/10.1103/PhysRevFluids.6.034301>
- Barkley, S.J., J.E. Lynch, E.J. Miklaszewski, J.M. Dilger, W.F. Crespo, **J.B. Michael**, **S. Subramaniam**, and **T.R. Sippel**, “Microwave-assisted modulation of light emission intensity in alkali-pyrotechnic plumes,” *Combust Flame* **225**, 406–16, 2021. <https://doi.org/10.1016/j.combustflame.2020.11.005>
- Clarke, G.A., B.X. Hartse, A.E. Niaraki Asli, M. Taghavimehr, N. Hashemi, M.A. Shirsavar, R. Montazami, N. Alimoradi, V. Nasirian, L.J. Ouedraogo, **N.N. Hashemi**, “Advancement of Sensor Integrated Organ-on-Chip Devices,” *Sensors* **21**:1367, 2021. <https://doi.org/10.3390/s21041367>
- Culp, T.E, K. Biswajit, K.P. Brickey, M. Geitner, T.J. Zimudzi, J.D. Wilbur, S.D. Jons, A. Roy, Mou Paul, **B. Ganapathysubramanian**, A.L. Zydney, M. Kumar, and Enrique D. Gomez, “Nanoscale control of internal inhomogeneity enhances water transport in desalination membranes,” *Science* **371**, 6524:72-75, 2021. <https://doi.org/10.1126/science.abb8518>
- Ilgun, A., **A. Passalacqua**, and **R.O. Fox**, “Solution of the first-order conditional moment closure for multiphase reacting flows using quadrature-based moment methods,” *Chemical Engineering Journal* **405**, 127020, 2021. <https://doi.org/10.1016/j.cej.2020.127020>
- Ilgun, A., X. Hu, **A. Passalacqua**, **R.O. Fox**, F. Bertola, M. Milosevic, and F. Visscher, “CFD simulations of stirred-tank reactor for gas-liquid and gas-liquid-solid systems using OpenFOAM,” *International Journal of Chemical Reactor Engineering*, 10.1515/ijcre-2019-0229, 2021. <https://doi.org/10.1515/ijcre-2019-0229>
- Nadeem, H., **S. Subramaniam**, K. Sinha, and **T.J. Heindel**, “Characterization of intruder particle motion in a bladed mixer,” *Powder Technology*, 381:440-450, 2021. <https://doi.org/10.1016/j.powtec.2020.12.002>
- Pillers, R.A., and **T.J. Heindel**, “Dynamic Visualization of Hydrate Formation using X-ray Imaging,” *Journal of Petroleum Science and Engineering*, 200, Paper 108334, 2021. <https://doi.org/10.1016/j.petrol.2020.108334>
- Shabaniverki, S., S. Xie, J. Ren, and **J.J. Juárez**, “Soft Ferrofluid Actuator Based on 3D-Printed Scaffold Removal,” *3-D Printing and Additive Manufacturing*, online 4 Feb 2021. <https://doi.org/10.1089/3dp.2020.0012>
- Williams, K., **N.N. Hashemi**, M Riddley, G.A. Clarke, N. Igwe, D. Elnagib, and Reza Montazami, “Progress of graphene devices for electrochemical biosensing in electrically excitable cells.” *Progress in Biomedical Engineering* **3** (2), 022003, 2021. <https://doi.org/10.1088/2516-1091/abe55b>
- Wrede, A.H., J. Luo, R. Montazami, A. Kanthasamy, **N.N. Hashemi**, “How do neuroglial cells respond to ultrasound induced cavitation?” *AIP Advances* **11** (1), 015314, 2021. <https://doi.org/10.1063/5.0034936>