

Dr. Matteo Strumendo

List of publications

Articles in peer-reviewed journals

- 1) A. Benedetti, J. Ilavsky, C. Segre, M. Strumendo, “Analysis of textural properties of CaO-based CO₂ sorbents by ex-situ USAXS”, *Chemical Engineering Journal*, 355, 760-776, 2019.
- 2) D. Peltzer, J. Munera, L. Cornaglia, M. Strumendo, “Characterization of potassium doped Li₂ZrO₃ based CO₂ sorbents: stability properties and CO₂ desorption kinetics”, *Chemical Engineering Journal*, 336, 1-11, 2018.
- 3) M. Strumendo, “Solution of the incompressible Navier-Stokes equations by the method of lines”, *International Journal for Numerical Methods in Fluids*, 80, 317-339, 2016.
- 4) A. Biasin, C.U. Segre, M. Strumendo, “CaCO₃ crystallite evolution during CaO carbonation: critical crystallite size and rate constant measurement by in-situ synchrotron radiation X-ray powder diffraction”, *Crystal Growth and Design*, 15, 5188-5201, 2015.
- 5) A. Bertucco, E. Sforza, V. Fiorenzato, M. Strumendo, “Population balance modeling of a microalgal culture in photobioreactors: comparison between experiments and simulations”, *AIChE Journal*, 61, 2702-2710, 2015.
- 6) A. Benedetti, M. Strumendo, “Application of a random pore model with distributed pore closure to the carbonation reaction”, *Chemical Engineering Transactions*, 43, 1153-1158, 2015
- 7) A. Benedetti, M. Modesti, M. Strumendo, “CFD analysis of the CaO-CO₂ reaction in a thermogravimetric apparatus”, *Chemical Engineering Transactions*, 43, 1039-1044, 2015.
- 8) A. Biasin, C.U. Segre, G. Salviulo, F. Zorzi, M. Strumendo, “Investigation of CaO-CO₂ reaction kinetics by in-situ XRD using synchrotron radiation”, *Chemical Engineering Science*, 127, 13-24, 2015.
- 9) Strumendo M., Arastoopour H., “Solution of population balance equations by the FCMOM for in-homogeneous systems”, *Industrial and Engineering Chemistry Research*, 49(11), 5222-5230, 2010.
- 10) Liu Y., Strumendo M., Arastoopour H., “Simulation of methane production from hydrates by depressurization and thermal stimulation”, *Industrial and Engineering Chemistry Research*, 48(5), 2451-2464, 2009.
- 11) Strumendo M., Arastoopour H., “Solution of bivariate population balance equations using the FCMOM”, *Industrial and Engineering Chemistry Research* 48(1), 262-273, 2009.

- 12) Ahmadzadeh A., Arastoopour H., Teymour F., Strumendo M., "Population balance equations' application in rotating fluidized bed polymerization reactor", *Chemical Engineering Research and Design* 86, 329-343, 2008.
- 13) Liu Y., Strumendo M., Arastoopour H., "Numerical simulation of methane production from a methane hydrate formation", *Industrial and Engineering Chemistry Research* 47, 2817-2828, 2008.
- 14) Strumendo M., Arastoopour H., "Solution of PBE by MOM in Finite Size Domains", *Chemical Engineering Science*, 63, 2624-2640, 2008.
- 15) Strumendo M., Bertucco A., Elvassore N., "Modeling of particle formation processes by gas saturated solutions atomization", *The Journal of Supercritical Fluids*, 41, 115-125, 2006.
- 16) Strumendo M., Canu P., "Method of moments for the dilute granular flow of inelastic spheres", *Physical Review E* 66, 041304/1-20, 2002.

Articles in peer-reviewed conference proceedings

- 1) Strumendo M., "Solution of population balance equations using the FCMOM", PBM 2010. Proceedings of the Fourth International Conference on Population Balance Modelling, Berlin, Germany, September 15-17, 2010, 293-300.
- 2) Strumendo M., Arastoopour H., Ahmadzadeh A., "Numerical simulation of poly-dispersed systems", Circulating Fluidized Bed Technology IX. Proceedings of the Ninth International Conference on Circulating Fluidized Beds, Hamburg, Germany, May 13-16, 2008, TuTech Innovation GmbH, 313-318, 2008.
- 3) Strumendo M., Gidaspow D., Canu P., "Method of moments for gas-solid flows: application to the riser", Circulating Fluidized Bed Technology VIII. Proceedings of the 8th International Conference on Circulating Fluidized Beds, Hangzhou, China, May 10-13, 2005, International Academic Publishers, 936-942, 2005.

Textbooks (in italian)

M. Strumendo, "Appunti di Fondamenti dell'Ingegneria di Processo", Libreria Progetto, 2017, Padova (Italy), ISBN: 978-88-96477-96-0