

Publications

Journal articles

A. Saccardo, J. Wolf, B. Hankamer, F. Bezzo (2025). Scaling-up information from high-throughput pulsed light data to predict microalgae growth dynamics in photobioreactors. *Algal Res.*, **89**, 104073

G. Rigoni, E. Calvo, C. Glytsou, M. Carro-Alvarellos, M. Noguchi, M. Semenzato, C. Quirin, F. Caicci, N. Meneghetti, M. Sturlese, T. Ishihara, S. Moro, C. Rampazzo, N. Ishihara, F. Bezzo, L. Salviati, J. Vazquez, G. Sales, C. Romualdi, J.A. Enriquez, L. Scorrano. M.E. Soriano (2025). MARIGOLD and MitoCIAO, two searchable compendia to visualize and functionalize protein complexes during mitochondrial remodeling. *Cell Metab.*, **37**, 1024–1038

D. Crîstiu, F. d'Amore, F. Bezzo (2025). Optimal design of sustainable supply chains for critical raw materials recycling in renewable energy technologies. *Resour. Conserv. Recy.*, **218**, 108250

D. Crîstiu, F. You, F. d'Amore, F. Bezzo (2025). Strategic design and multiperiod optimization under uncertainty of solid sorbent direct air capture supply chains in Europe. *Ind. Eng. Chem. Res.*, **64**, 5493–5510

L. Varnier, F. d'Amore, K. Clausen, G. Melitos, B. de Groot, F. Bezzo (2025). Combined electrification and carbon capture for low-carbon cement: techno-economic assessment of different designs. *J. Clean. Prod.*, **498**, 145029

G. Barberi, A. Benedetti, P. Diaz-Fernandez, D.C. Sévin, J. Vappiani, G. Finka, F. Bezzo, P. Facco (2025). Productive CHO cell lines selection in biopharm process development through machine learning on metabolomic dynamics. *AIChE J.*, **71**, e18602

L. Beccaro, P. Facco, R.M. Dhenge, M.J. Khala, F. Cenci, F. Bezzo, M. Barolo (2024). Accelerating pharmaceutical tablet development by transfer of powder compaction equipment across types and scales. *Int. J. Pharm.*, **667**, 124904

A. Saccardo, A. Porcelli, L. Borella, E. Sforza, F. Bezzo (2024). Model-based optimisation of microalgae growth under high-intensity and high-frequency pulsed light conditions. *J. Clean. Prod.*, **469**, 143238

E. Arnese-Feffin, P. Facco, F. Bezzo, M. Barolo (2024). Systematizing product design by latent-variable modeling – A unifying framework for the formulation of PLS model-inversion problems. *Chem. Eng. Sci.*, **299**, 120505

F. Cenci, S. Diab, P. Ferrini, C. Harabaiju, M. Barolo, F. Bezzo, P. Facco (2024). Predicting drug solubility in organic solvents mixtures: A machine-learning approach supported by high-throughput experimentation. *Int. J. Pharm.*, **660**, 124233

E. Sangoi, M. Quaglio, F. Bezzo, F. Galvanin (2024). An optimal experimental design framework for fast kinetic model identification based on artificial neural networks. *Comp. Chem. Eng.*, **187**, 108752

E. Arnese-Feffin, P. Facco, D. Turati, F. Bezzo, M. Barolo (2024). Understanding fouling in an industrial biorefinery membrane separation process by feature-oriented data-driven modeling. *Ind. Eng. Chem. Res.*, **63**, 9136–9150

A. Saccardo, J. Wolf, F. Bezzo, B. Hankamer (2024). Modelling microalgae growth based on dynamic high throughput pulsed light screens. *Chem. Eng. J.*, **490**, 151684

M. Scomazzon, E. Barbera, F. Bezzo (2024). Alternative sustainable routes to methanol production: Techno-economic and environmental assessment. *J. Env. Chem. Eng.*, **12**, 112674

M. Visonà, F. Bezzo, F. d'Amore (2024). Techno-economic analysis of onboard CO₂ capture for ultra-large container ships. *Chem. Eng. J.*, **485**, 149982

M. Geremia, F. Bezzo, M. Ierapetritou (2024). Design space determination of pharmaceutical processes: effects of control strategies and uncertainty. *Eur. J. Pharm. Biopharm.*, **194**, 159–169

M. Geremia, G. Cisco, S. Diab, G. Bano, F. Bezzo (2024). Targeting fidelity of pharmaceutical systems models by optimization of precision on parameter estimates. *Comp. Chem. Eng.*, **181**, 108542

D. Crîstiu, F. d'Amore, F. Bezzo (2024). Economic and environmental optimisation of mixed plastic waste supply chains in Northern Italy comparing incineration and pyrolysis technologies. *Comp. Chem. Eng.*, **180**, 108503

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F. Sartori, P. Facco, F. Zuecco, F. Bezzo, M. Barolo (2023). Optimal indicator-variable approach for trajectory synchronization in uneven-length multiphase batch processes. *Ind. Eng. Chem. Res.*, **62**, 18511-18525

D. Crîstiu, F. d'Amore, P. Mocellin, F. Bezzo (2023). Multi-Objective optimisation of a Carbon Capture and Sequestration supply chain under seismic risk constraints. A case study considering industrial emissions in Italy. *Int. J. Greenh. Gas Con.*, **129**, 103993

M. Geremia, F. Bezzo, M. Ierapetritou (2023). A novel framework for the identification of complex feasible space. *Comp. Chem. Eng.*, **179**, 108427

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C. Castaldello, P. Facco, F. Bezzo, C. Georgakis, M. Barolo (2023). Data-driven tools for the optimization of a pharmaceutical process through its knowledge-driven model. *AIChE J.*, **69**, e17925

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F. Sartori, F. Zuecco, P. Facco, F. Bezzo, M. Barolo (2022). Data analytics can help reduce energy consumption in the industrial manufacturing of specialty chemicals. *Chem. Eng. Trans.*, **96**, 229-234

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A. Saccardo, F. Bezzo, E. Sforza (2022). Microalgae growth in ultrathin steady-state continuous photobioreactors: Assessing self-shading effects. *Front. Bioeng. Biotechnol.*, **10**, 977429

E. Arnese-Feffin, P. Facco, F. Bezzo, M. Barolo (2022). Digital design of new products: accounting for output correlation via a novel algebraic formulation of the latent-variable model inversion problem. *Chemom. Intell. Lab. Sys.*, **227**, 104610

G. Barberi, A. Benedetti, P. Diaz-Fernandez, D.C. Sévin, J. Vappiani, G. Finka, F. Bezzo, M. Barolo, P. Facco (2022). Integrating metabolome dynamics and process data to guide cell line selection in biopharmaceutical process development. *Metab. Eng.*, **72**, 353–364

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