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Engineering & Scientific Consulting

Claudio V.B. Favero, Ph.D.

Senior Associate | Thermal Sciences
1075 Worcester St. | Natick, MA 01760
(508) 652-8574 tel | cfavero@exponent.com

Professional Profile

Dr. Fávero is a chemical engineer in Exponent's Thermal Sciences Practice consulting primarily in the areas of oil and gas, process safety and risk analysis, and advanced thermal fluid analysis. Dr. Fávero specializes in the investigation and analysis of reactive flow processes. During his time at Exponent, Dr. Fávero has analyzed the hazards of flammable liquid storage and dispensing systems, conducted studies of laminar and turbulent flow of non-Newtonian fluids, and investigated the failure of multiple pressurized gas systems. He has extensive experience in reactive flow process, upstream (petroleum) engineering, and flow assurance with emphasis on asphaltene and waxes deposition.

Prior to joining Exponent, Dr. Fávero performed his Ph.D. research at the University of Michigan with focus on precipitation and deposition of wax and asphaltenes, colloidal stability, and crude oil rheology. In this area of upstream engineering and flow assurance, Dr. Fávero made significant advances in understanding the mechanism of asphaltene destabilization, aggregation, and deposition. He also developed a asphaltene deposition apparatus that is used to evaluate performance of asphaltene deposition inhibitors. Dr. Fávero also contributed to the development of a software to predict wax deposit formation on the interior wall of subsea pipelines.

Academic Credentials & Professional Honors

Ph.D., Chemical Engineering, University of Michigan, Ann Arbor, 2018

M.S., Chemical Engineering, University of Michigan, Ann Arbor, 2017

B.Eng., Chemical Engineering, Universidade Estadual de Maringa, 2012

Languages

Portuguese

Publications

Duran, J.A., Schoeggl, F.F., Yarranton, H.W., Fávero, C.V.B. and Fogler, H.S., 2019. Effect of Air on the Kinetics of Asphaltene Precipitation from Diluted Crude Oils. *Energy & Fuels*, 34(2), pp.1408-1421.

Mahir, L.H.A., Fávero, C.V.B., Ketjuntawa, T., Fogler, H.S. and Larson, R.G., 2018. Mechanism of wax deposition on cold surfaces: gelation and deposit aging. *Energy & Fuels*, 33(5), pp.3776-3786.

Favero, C.V.B., Moran, S. and Eniola-Adefeso, O., 2018. The Power of Peer Mentoring in Enabling a

Diverse and Inclusive Environment in a Chemical Engineering Graduate Program. *Chemical Engineering Education*, 52(2), pp.79-88

Fávero, C.V.B., Maqbool, T., Hoepfner, M., Haji-Akbari, N. and Fogler, H.S., 2017. Revisiting the flocculation kinetics of destabilized asphaltenes. *Advances in colloid and interface science*, 244, pp.267-280.

Fávero, C.V.B., Hanpan, A., Phichphimok, P., Binabdullah, K. and Fogler, H.S., 2016. Mechanistic investigation of asphaltene deposition. *Energy & Fuels*, 30(11), pp.8915-8921.

Hoepfner, M.P., Fávero, C.V.B., Haji-Akbari, N. and Fogler, H.S., 2013. The fractal aggregation of asphaltenes. *Langmuir*, 29(28), pp.8799-8808.

Lenzi, G.G., Fávero, C.V.B., Colpini, L.M.S., Bernabe, H., Baesso, M.L., Specchia, S. and Santos, O.A.A., 2011. Photocatalytic reduction of Hg (II) on TiO₂ and Ag/TiO₂ prepared by the sol-gel and impregnation methods. *Desalination*, 270(1-3), pp.241-247.

Lenzi, G.G., Lenzi, E.K., Fávero, C.V.B., Lenzi, M.K., Jorge, R.M.M., dos Santos, O.A.A. and Jorge, L.M.M., 2010. Simulation Studies of Steam Reforming of Methane using Ni-Al₂O₃ Catalysts. *International Journal of Chemical Reactor Engineering*, 8(1).

Presentations

Fávero, C.V.B., Parker, S., Stern, M.C. and Kytomaa, H.K., 2019, April. Impact of Time on Asphaltene Destabilization Detection in Unconventional Fuels. In 2019 Spring Meeting and 15th Global Congress on Process Safety. AIChE.

Fávero, C.V.B., Kach, J., Fogler, H.S., 2018, The Effect of Polydispersity and Amphiphiles on Asphaltene Stability, 19th International Conference on Petroleum Phase Behavior and Fouling, USA.

Mahir, L.H.A., Fávero, C.V.B., Ketjuntiwa, T., Fogler, H.S., Larson, R.G., 2018. Mechanisms of Wax Deposition on Cold Surfaces, 19th International Conference on Petroleum Phase Behavior and Fouling, USA.

Larson, R.G., Fávero, C.V.B., 2017. Transport Problems in the Spirit of Stuart Churchill for Teaching and Research at the University of Michigan, 2017 AIChE Annual Meeting.

Eniola Adefero, E., Fávero, C.V.B., Moran, S.E., 2017 Peer Mentoring in Graduate School - Fostering Diversity to Achieve Scholarly Excellence, 2017 AIChE Annual Meeting.

Fávero, C.V.B., Hanpan, A., Phichphimok, P., Binabdullah, K. and Fogler, H.S., 2016. Mechanistic investigation of asphaltene deposition. 17th International Conference on Petroleum and Phase Behavior and Fouling, Denmark.

Fávero, C.V.B., Fogler, H.S., 2013. Experimental study on the formation of barium sulfate deposits in interior wall of pipes, 14th International Conference on Petroleum and Phase Behavior and Fouling, France.

Fávero, C.V.B., Fogler, H.S., 2012. Mechanism of asphaltene precipitation via Small-Angle Neutron Scattering, 2012 AIChE Annual Meeting.