Jose M.

Professional in Residence, Unit Operations Laboratory
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PROFILE

Chemical Engineer, LSU ChE faculty since Fall 2022, and over 38 years professional experience in catalytic process design and development, as well as commercial implementation and support, in chemical and refining industries. Fluent in Spanish and English. Interested in ChE education of practical commercial applications.

EXPERIENCE

Professional in Residence, LSU Chemical Engineering – August 2022 - Present
Instructor of Record, CHE-4162, Unit Operations Laboratory.

Retired (38 yr at ExxonMobil) - December 2020

Engineering Associate, ExxonMobil; Baytown, TX — 2008—2020
Manufacturing process support, and catalyst and reactor engineering R&D. Global expert in high pressure hydrogenation for Escorez 5000 process to produce tackifying resin.

R&D Lead for new chemical process development at pilot scale.

Engineering Associate, ExxonMobil; Baton Rouge, LA — 2004—2008
Manufacturing process support, and catalyst and reactor engineering R&D. Global expert in high pressure hydrogenation for Escorez 5000 process to produce tackifying resin.

Roles lead to Sr Staff Engineer, ExxonMobil; Baton Rouge, LA — 1986—2004
Manufacturing process support, and catalyst and reactor engineering R&D. Global expert in high pressure hydrogenation for / and Oxo process.

Sr Engineer, Exxon Research & Development Labs; Baton Rouge, LA — 1982—1986
Catalyst and reaction engineering R&D. Supported refining process, and developed new process technology.

EDUCATION

University of Pennsylvania; Philadelphia, PA — Chemical and Biochemical Engineering PhD (1982) and MS (1980).

University of PR; Mayaguez, PR — BSEE (1976) , BSChE (1975)

SKILLS

Catalyst and reaction engineering, design, and characterization. Catalytic process development and scale-up. Commercial process and reactor monitoring and trouble shooting.

PATENTS AND PUBLICATIONS

1. US 2020EM383-PROV - In progress: Hydrocarbon Resins Prepared by Sequential Hydrogenation and Direct Decoloration.
2. US 10,259,765 - Process for making cyclohexanone. 2019/4/16.
3. US 10,252,968 - Process for making cyclohexanone. 2019/4/9.
4. EP 1,697,287B1 - Improvements in or relating to hydrogenation. 2015/8/26.
5. US H2,290 - High strength presulfided catalyst for hydrogenating hydrocarbon resins. 2014/4/1.
6. US 8,536,392 - Series catalyst beds. 2013/9/17.
7. US 7,588,738 - Series catalyst beds. 2009/9/15.
8. US 7,586,017 - Hydrogenation. 2009/9/8.
9. CA 2,360,035A1 - Improved process for preparing alcohols by the oxo process. 2000/7/20.
10. US 6,278,030 - Process for preparing alcohols by the Oxo process. 2004/6/16.
11. US 5,663,388 - Process for converting aldehydes to acids. 1997/9/2.
12. US 5,399,793 - Hydrogenation catalyst for oxo alcohol process. 1995/3/21.
13. US 5,382,715 - Hydrogenation catalyst with low phosphorous content for oxo alcohol process. 1995/1/17.
14. US 5,306,848 - Hydrogenation catalyst for oxo alcohol process. 1994/4/26.
15. US 5,059,718 - Oxo process for increasing yield of oxo alcohol. 1991/10/22.
16. US 4,888,131 - Synthesis gas preparation and catalyst therefor. 1989/12/19.
17. Interpretation of coal pyrolysis kinetics, Ind. Eng. Chem. Process Des. Dev. 1986, 25, 1, 49-54. Jose M. Vargas & Daniel D. Perlmutter.