

**1. Name: Jorge F. Gabitto, Ph.D.**

**2. Education:**

B.S., Applied Chemistry, University of Buenos Aires, Argentina, 1977

Ph.D., Chemical Engineering, University of Buenos Aires, Argentina, 1984

**3. Academic experience:**

Prairie View A&M University, Professor, 2008 - Present, full time

Prairie View A&M University, Associate Professor, 1992-2008, full time

Prairie View A&M University, Department Head, 1992 – 1997, full time

University of Houston, Post-Doctoral Fellow, 1988 – 1991, full time

University of California at Davis, Research Associate, 1987 – 1988, full time

University of Buenos Aires, Instructor, 1980 – 1987, full time

**4. Non-academic experience:**

Visiting Summer Scholar, Oak Ridge National Laboratory, Chemical Sciences, Energy and Transportation, Environmental, and Nuclear Science and Technology Divisions, 1999 – 2019

**5. Certifications or professional registrations: N/A**

**6. Current membership in professional organizations:**

(a) Member of AIChE, (b) Member of SPE, (c) Member of ACS.

**7. Honors and awards:**

- i. “Meritorious Faculty Chemical Engineering Department”. Prairie View A & M University (2003, 2004, 2006, 2007, and every year till present).
- ii. Award “Outstanding Faculty Chemical Engineering Department”. Prairie View A & M University (1992, 1995, and 2001).
- iii. C.O.N.I.C.E.T. (Argentina National Research Council), External fellowship to perform Post-Doctoral research.
- iv. C.O.N.I.C.E.T. (Argentina National Research Council), three kind of fellowships to conduct graduate research.

**8. Service activities:**

- i. Faculty Senate member (2014-2018 and 2020 - present)
- ii. Chair and Member of the College of Engineering Curriculum Committee (2004-present)
- iii. Member of the College Promotion Committee (2001-present)
- iv. Member of many College Committees (1991-present)
- v. Chair and Member of many Departmental Committees (1991-present)
- vi. NSF proposal reviewer (1996-present)
- vii. Scientific Journals Paper Reviewer (1991-present)
- viii. Oak Ridge National Laboratory Scientific Papers Reviewer (1999-present)

## 9. Important Publications and Presentations from the Last Five Years :

- i. "AIChE Annual Meeting," November 7-19, 2021, Boston, MA.  
Article: "CO<sub>2</sub> Capture Using Phase-Changing Bis-Iminoguanidines (BIGs) with Amino Acids."
- ii. Shamim, N., Binzaid, Sh., Gabitto, J., and Attia, J. "A Combined Chemical-Electrochemical Process to Capture CO<sub>2</sub> and Produce Hydrogen and Electricity," *Energies* 2021, *14*, 5807. <https://doi.org/10.3390/en14185807>.
- iii. Kasturi, A.; Gabitto, J. F.; Custelcean, R.; and Tsouris, C "A Process Intensification Approach for CO<sub>2</sub> Absorption using Amino Acid Solutions and a Guanidine Compound," *Energies* 2021, *14*, 5821, <https://doi.org/10.3390/en14185821>.
- iv. Kasturi, A.; Gabitto, J.; Tsouris, C; Custelcean, R. "Carbon Dioxide Capture with Aqueous Amino Acids: Mechanistic Study of Amino Acid Regeneration by Guanidine Crystallization and Process Intensification," *Separation & Purification Technology*, 271, 118839 (2021). [doi.org/10.1016/j.seppur.2021.118839](https://doi.org/10.1016/j.seppur.2021.118839).
- v. Tang, K., Yiacoumi, S., Li, Y., Gabitto, J., and Tsouris, C. "Optimal Conditions for Efficient Flow-Electrode Capacitive Deionization." *Separation and Purification*, DOI: 10.1016/j.seppur.2020.116626, 2020
- vi. Gabitto, J. and Tsouris, C. "Modeling the Operation of Slurry Carbon Electrodes using a Hybrid Approach," *hal-02412872v1*, 2019.
- vii. Kasturi, A. S., Ladshaw, A., Yiacoumi, S., Gabitto, J., Garrabrant, K., Custelcean, R., and Tsouris, C. "CO<sub>2</sub> Absorption from Simulated Flue Gas in a Bubble Column," *Sep. Sci. & Tech.*, DOI: 10.1080/01496395.2019.1617745, 2019.
- viii. Gabitto, J., Custelcean, R., and Tsouris, C. "Simulation of Carbon Dioxide Absorption by Amino Acids in Two-Phase Batch and Bubble Column Reactors," *Sep. Sci. & Tech.*, DOI: 10.1080/01496395.2019.1609030, 2019.
- ix. Gabitto, J. and Tsouris, C. "Determination of Reactive Mass Transfer Coefficients for CO<sub>2</sub> Absorption Predictions," *Sep. Sci. & Tech.*, DOI: 10.1080/01496395.2019.1603240, 2019.
- x. Gabitto, J. and Tsouris, C. "Modeling Sulfur Poisoning of Palladium Membranes Used for Hydrogen Separation." *Int. Journal of Chem. Eng.*, vol. 2019, Article ID 9825280, <https://doi.org/10.1155/2019/9825280>, 103-111, 2019.
- xi. Tang, K., Gabitto, J., Yiacoumi, S., and Tsouris, C. "Seawater Desalination by Over-Potential Membrane Capacitive Deionization: Opportunities and Hurdles." *Chem. Eng. Journal*, **357**, 103-111, 2019.
- xii. "AIChE Spring Meeting," October 29 - November 3, 2020 Houston, TX. Article: "CO<sub>2</sub> Absorption in Slurry Bubble Columns."
- xiii. "CDI-E Conference," May 20-23, 2019 Beijing, China. Article: "Water Desalination by Overpotential Membrane Capacitive Deionization and Flow-electrode Capacitive Deionization."

## 10. Most recent professional development activities:

- i. Guest editor, "New Carbon Dioxide Sequestration Technologies," MDPI, 2020.
- ii. Review editor, "Frontiers in Chemical Engineering," Frontiers, 2020-present.
- iii. Laboratory Safety Training, Oak Ridge National Laboratory, 2015-2019.