Dr. Jaime Bonilla Ríos

Areas of interest:

- **Rheology of Polymer and Nano-Composites**
- **Polymer Processing**
- **Modeling**

Dr. Bonilla-Rios has developed a successful academic and administrative career at Tecnologico de Monterrey, an Institution with 26 Campuses throughout México and with international presence in Latin American and liaison offices in Canada, USA, Europe and Asia. Currently, Dr. Bonilla is the Associate Dean for Continuing Education, Consulting and International Affairs for the National School of Engineering and Sciences; Professor on the Chemical and the Mechanical Engineering Department and member of the Nanotechnology Research Group.

As Professor and Researcher, Dr. Bonilla has focused on the generation of knowledge in their specialty area, he has worked in collaboration with other researchers and has been advising master and doctoral theses. In this way, he has been senior adviser to 25 master's thesis, four Doctoral dissertation and four more in progress. He has also collaborated with researchers from the Centre of Applied Chemistry (Saltillo, Coahuila, Mexico), Rice University, University of Houston, the Technical University of Hamburg (TUHH) and the Johannes Kepler University at Linz, Austria. *He has conducted research with the sponsorship of TOTAL Petrochemicals and Refining in the USA, through its Tech Center at La Porte, TX.*

He is currently a member of the Sistema Nacional de Investigadores (National Research System) Level 1 and a Visiting Professor at Rice University in Houston, TX.

Dr. Bonilla-Rios has a B.S. in Chemistry, from ITESM, Campus Monterrey. A Master in Chemical Engineering from Rice University and a Ph.D. in Interdisciplinary Engineering with emphasis on Polymer Rheology, from Texas A & M University.

Tecnológico de Monterrey

Pertinent papers

IN PROGRESS

- **Thermodynamic path to attain time pressure, concentration and temperature superposition shift factors for polystyrene-carbon dioxide mixtures used for insulation purposes.** Cesar Ibarra, Jaime Bonilla-Ríos, Cecilia D. Trevino, Leonardo Cortes
- **Preparation and Characterization of chemically-modified Hallosyte Nano Tubes/PET nanocomposites for bottling and active packaging applications.** Fernando Escobar; Adriana Espinoza, Jaime Bonilla-Rios
- **Synthesis of tin dioxide nanoparticles for a robotic nose sensor .** Guillermo Sotelo, Fernando Escobar, Jaime Bonilla-Rios.
- **Study of surface tension of enamels on SWCNT bucky papers.** Jafet A. Mata, Enrique Barrera, Jaime Bonilla-Ríos.

PUBLISHED

- **Tailoring the Diameters of Electro-Mechanically Spun Fibers by Controlling Their Deborah Numbers.** Polymers **2020**, *12*, 1358; Domingo R. Flores-Hernandez , Braulio Cardenas-Benitez, Sergio O. Martinez-Chapa and Jaime Bonilla-Rios *
- **Flash DSC crystallization study of blown film grade bimodal high density polyethylene (HDPE) resins. Part 2.** Non-isothermal kinetics. Journal of Polymer Science Part B Polymer Physics 55(24) · September 2017. Cecilia D. Treviño-Quintanilla, Ramanan Krishnammorti, Jaime Bonilla-Ríos.
- **Flash DSC crystallization study for blown film grade bimodal HDPE resins. I. Isothermal kinetics and its application of the blown film modeling.** Journal of Polymer Science Part B Polymer Physics 54(23) · September 2016 Cecilia D. Treviño-Quintanilla, Ramanan Krishnammorti, Jaime Bonilla-Ríos.
- **A Natural Frequency Approach to Study the Blown Film Helicoidal Stability of HDPE Bimodal Resins and Its Relation to their Rheological Behavior.** Cecilia D. Treviño-Quintanilla, Fabián Luna Cabrera, Jaime Bonilla-Ríos, Leonardo F. Cortes Rodríguez, Polymer Engineering and Science, Vol.55, Pag.2910-2921, 2015.

Pertinent papers

PUBLISHED

- **Property Relationship in Organosilanes and Nanotubes Filled Polypropylene Hybrid Composites doi:10.3390/ma7107073,** Alejandra J. Monsiváis-Barrón Jaime Bonilla-Ríos, Antonio Sánchez-Fernández, Materials, Vol.7, Pag.7073-7092, 2014.
- **Oxygen Permeation Properties of HDPE-Layerd Siilicate Nanocomposites,** Monsiváis Barrón, Alejandra Julieta Bonilla Ríos, Jaime, Ramos del Valle, Luis Francisco Palacios Aguilar, Erika, POLYMER BULLETIN, Vol.70, Pag.939-951, 2013.
- **Relation Between Bubble Stability in the film blowing process and MFI.** Erika Palacios-Aguilar, Leonardo Cortés-Rodríguez, Jaime Bonilla-Ríos, Society of Plastics Engineers Annual Technical Conference 2009, Vol. , Pag.805-807, 2009.
- **Peroxide Assited Coupuling and Characterization of Carbon-Nanofiber-Reinforced Polypropylene Composites,** A. de la Vega Oyervides, Jaime Bonilla Ríos, L. F. Ramos de Valle, L. A. S. de Almeida Prado Karl Schulte, Macromolecular Materials and Engineering, Vol.292, Pag.1095-1102, 2007.
- **In Situ Synthesis Of Iron Oxide Nanoparticles In A Styrene-divinyl-benzene Copolymer**, L.A. García-Cerda, R. Chapa-Rodríguez, J. Bonilla-Ríos, Polymer Bulletin, Vol.58, Pag.989-994, 2007.
- **Effects Of Nanofiber Treatments On The Properties Of Vapor Grown Carbon Fiber Reinforced Composites**, P. Cortes, K. Lozano, E. V. Barrera, J. Bonilla-Rios, Journal of Applied Polymer Science, Vol.89, Pag.2527-2534, 2003.
- **A Study Of Nanofiber Reinforced Thermoplastic Composites (Ii): Investigation Of The Mixing Rheology And Conduction Properties**, K. Lozano, J. Bonilla Rios, E. V. Barrera, Journal of Applied Polymer Science, Vol.80, Pag.1162-1172, 2001.