Software

Mathematica • LaTeX • Python • Fortran • Qt (C++) • Inkscape

Languages

English (fluent), French (conversational), Spanish (basic), Bulgarian (native)

Publications

Journal Papers

Priyanka S Desai*, Beom-Goo Kang*, **Maria Katzarova***, Ryan Hall, Qifan Huang, Sanghoon Lee, Maksim Shivokhin, Taihyun Chang, David C Venerus, Jimmy Mays, et al. Challenging tube and slip-link models: Predicting the linear rheology of blends of well-characterized star and linear 1, 4-polybutadienes. *Macromolecules, **Contributed equally, 49(13):4964–4977, 2016.

Maria Katzarova, Ling Yang, Marat Andreev, Andrés Córdoba, and Jay D Schieber. Analytic slip-link expressions for universal dynamic modulus predictions of linear monodisperse polymer melts. *Rheologica Acta*, 54(3):169–183, 2015.

Maria Katzarova, Marat Andreev, Yelena R Sliozberg, Randy A Mrozek, Joseph L Lenhart, Jan W Andzelm, and Jay D Schieber. Rheological predictions of network systems swollen with entangled solvent. *AIChE Journal*, 60(4):1372–1380, 2014.

Conference Papers

Maria Katzarova, Priyanka S. Desai, Beom-Goo Kang, Ryan Hall, Qifan Huang, Sanghoon Lee, Taihyun Chang, David C. Venerus, Jimmy Mays, , Jay D Schieber, and Ronald G. Larson. Challenging tube and slip-link models: Predicting the linear rheology of 1,4-polybutadiene blends of well-characterized star and linear 1,4-polybutadienes. In *American Physical Society March Meeting 2016, Baltimore, Maryland, USA*. American Physical Society, 2016.

Maria Katzarova, Ling Yang, Marat Andreev, and Jay D Schieber. Simple desktop calculations for slip-link predictions of entangled polymers. In *The Society of Rheology 86th Annual Meeting, Philadelphia, Pennsylvania, USA*, pages 64–65. The Society of Rheology, 2014.

Technical Reports

Maria Katzarova, Yelena R Sliozberg, Jan W Andzelm, Randy A Mrozek, Joseph L Lenhart, and Jay D Schieber. Modeling of entangled network chains and linear solvent chains in a single-chain-mean-field slip-link model. Technical report, DTIC Document, 2013.

Dissertation

Maria Katzarova. *Slip-link modeling of entangled polymers: rheological applications and extracting friction from atomistic simulations*. PhD thesis, Illinois Institute of Technology, 2016.

Awards

2014: Society of Rheology Student-Member Travel Grant

2011: Society of Manufacturing Engineers Scholarship