



COST ACTION GREENERING – DATA COLLECTION

First name, Family Name: Roumiana Stateva

Type (Academic or Industrial): Academic

Country: Bulgaria

Leadership position in the COST: None

Working Group in which you are involved: WG1, WG3 and WG4

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Laboratory/Company: Institute of Chemical Engineering, Bulgarian Academy of Sciences

Laboratory/Company info (limited to 400 characters):

The Institute of Chemical Engineering (IChE) is the principal national academic organization and research center at Bulgarian Academy of Sciences for chemical and biochemical engineering. The mission of IChE is to contribute to the environmental sustainable development of Bulgaria with methodologies, potential and expertise in the scientific and applied research fields of chemical technology and industrial biotechnology.

Link to the home page of the Laboratory/Company: <https://iche.bas.bg/>

Fields of expertise (limited to 400 characters):

- Chemical Engineering;
- Chemical Engineering Thermodynamics;
- Advanced techniques for valorisation of high added value substances from natural matrices;
- Physical and Thermodynamic Properties Prediction;
- Modelling, Simulation and Design of Processes.

5 Main publications or patents:

- Ivanov, BB., A.G. Galushko, R.P. Stateva: “Phase Stability Analysis with Equations of State - A Fresh Look from a Different Perspective”. *Ind. Eng. Chem. Res.* **52**, 11208–11223 (2013).
- Coelho, J.A.P., R.M. Filipe, M.P. Robalo, RP Stateva: “Recovering Value from Organic Waste Materials: Supercritical Fluid Extraction of Oil from Industrial Grape Seeds”. *J. Supercritical Fluids* **141**, 68-77 (2018).
- de Souza A.R.C., S. Stefanov, M.C.M. Bombardelli, M.L. Corazza, R.P. Stateva: “Assessment of composition and biological activity of *Arctium lappa* leaves extracts obtained with pressurized liquid and supercritical CO₂ extraction”. *J. Supercritical Fluids* **152**, Article 104573 (2019).
- D. Villanueva-Bermejo, T. Fornari, M.V. Calvo, J. Fontecha, J.A.P. Coelho, R.M. Filipe, R.P. Stateva: “Application of a novel approach to modelling the supercritical extraction kinetics of oil from two sets of chia seeds”. *J. Industrial and Engineering Chemistry* **82**, 317-323 (2020).
- RP Stateva and GS Cholakov: Chapter 4 Challenges in the Modeling of Thermodynamic Properties and Phase Equilibrium Calculations for Biofuels Process



Design. In: *Process Systems Engineering for Biofuels Development*, pp 85-120, A. Bonilla-Petriciolet and G.P Rangaiah (Editors), © 2020 John Wiley & Sons Ltd. (2020).

Collaborations:

- HORIZON 2020 MSCA-RISE-2017: **PROJECT IProPBio** “Integrated Process and Product Design for Sustainable Biorefineries”. Lead Beneficiary. <https://ipropbio.sdu.dk>
- Agreement Coordinator of seven Inter-Institutional ERASMUS+ Programme 2014-2021 Agreements.

Facilities:

- Supercritical fluid extraction equipment;
- UV-vis spectrophotometer VWR UV 1600PC;
- YL Instrument 9300 HPLC System, YL Instrument System