Special Issue

Process Modeling and Risk Assessment of Ammonia and Hydrogen Storage and Transport Systems

Message from the Guest Editors

This Special Issue on “Process Modeling and Risk Assessment of Ammonia and Hydrogen Storage and Transport Systems” seeks high quality works focusing on the development and application of modeling and risk-based approaches to address safety, reliability, and performance challenges across the entire value chain. Topics include, but are not limited to:

- Dynamic simulation of ammonia and hydrogen storage and transportation systems;
- CFD modeling of accidental releases, dispersion, jet fires, vapor cloud explosions, and toxic dispersion of ammonia and hydrogen;
- Hydrogen embrittlement and material compatibility in storage and transport components;
- Process safety of liquid ammonia and liquid hydrogen storage and transportation system;
- Process design and optimization of ammonia decomposition hydrogen production and storage system;
- Quantitative risk assessment (QRA) and consequence analysis for storage facilities, refueling stations, pipelines, and transport vehicles;
- Safety zoning, mitigation strategies, and emergency response planning based on probabilistic risk metrics.

Guest Editors

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Editor-in-Chief

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