



Invited Talk 4



AI in the Chemical Industry – Successes, Challenges, Trends

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Abstract:

AI-based decision making in the chemical industry has become an area of strategic relevance and significant impact with a very broad range of applications. Two principles are at its core: (i) setting up appropriate AI-based models (i.e. Black-/White-/Greybox) which can already be used for transparency or prediction, and (ii) mathematical optimization for decision taking (i.e. multi-objective optimization). These two principles are outlined in this talk and will be supported with success stories illustrating the game changing character in the chemical industry. Some of these tools (i.e. Qritos [1]) are made public outside BASF and partners from industry and academia are encouraged to explore these tools.

[1] [BASF video series “Resins Stories Unplugged” Edition 4 – Digital twin for coating formulations \(youtube.com\)](#); [Qritos - Multi-criteria Optimization tool - 5-HT Online Seminar \(youtube.com\)](#); [Qritos: multi-objective optimization and decision making by BASF \(youtube.com\)](#)