



CHISA
2024
PRAGUE

The place, where people meet people and science meets culture

27th

International Congress of
Chemical and Process
Engineering

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Prague, Czech Republic



CSCHI

ČESKÁ SPOLEČNOST CHEMICKÉHO INŽENÝRSTVÍ
CZECH SOCIETY OF CHEMICAL ENGINEERING

AIChE
The Global Home of Chemical Engineers



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CHISA Topics

Section 1

Global Thoughts

Low to zero emission technologies
Carbon dioxide economy
Water supply, management, reuse, purification
Food in the focus
Sustainability and circularity
Healthcare, hygiene, medicine and pharmacology
The Covid outbreak and chemical engineering

Section 2

Energy

Energy to carbon footprint ratio
Low energy cost processes
Renewable energy and energy storage, hydrogen as a fuel
Energy self-sufficiency
Clean energy
Photochemistry, solar cells and solar powered technologies, fuel cells
Energy saving processes and technologies
Batteries

Section 3

Matter In Motion

Continuous process design and optimization (batch to continuous, flow chemistry)
Process intensification and miniaturisation
Fluid flow and microfluidics, multiphase flow
Microreactors for real-life products and scaled-up technologies
Mixing
Separation processes
Scale up of electrified reactors

Section 4

Not Only Faster

Reaction engineering and kinetics
Homogeneous and heterogenous catalysis
Catalytic processes
Design, preparation and characterisation of catalysts
Catalytic reactors

Section 5

Particles

Advanced functional materials
Designed, printed, integrated, used materials, 3D printing
Particulate and microporous solids, low-risk advanced materials
Biomimetics
Functional films and nanostructures
Sensors and sensing objects and nano-objects
Hierarchical structures and nanoparticles
Polymers and polymer technologies, conductive polymers

Section 6

Green Issues

No waste technologies and zero waste plants
Production-trade-customer zero waste chains
Urban mining, waste management
Microplastics and endocrine disruptors
Biotechnologies, biomass and biomass processing
Membrane processes, adsorption
Air, soil and water pollution, pollution control
Green and supercritical chemistry
VOC reduction, ionic liquids
Processes for environment

Section 7

You must know

Chemical reactors – all aspects
Transport phenomena
Distillation, extraction, SCF extraction, S-L separation, crystallisation
Thermodynamics, phase equilibria, multiphase processes
Chemical engineering computations and modelling, molecular dynamics, ab-initio calculations, mathematical predictions, neural networks
New and improved technologies
Chemical engineering and safety, prevention and loss control
Elimination of health and environmental hazards

Section 8

College

Educated chemical engineers
Teaching chemical engineering, new strategies, opportunities
Jobs in chemical engineering
Choosing chemical engineering as the field of studies – right or wrong?
Competitiveness of chemical engineers on the job market

Poster session



We are looking forward to welcoming you in Prague in 2024 !