CHEMICAL ENGINEERING RESEARCH AND DESIGN
Publication of the Institution of Chemical Engineers

TABLE OF CONTENTS

- Description p.1
- Impact Factor p.3
- Abstracting and Indexing p.3
- Editorial Board p.3
- Guide for Authors p.5

DESCRIPTION

ChERD aims to be the principal international journal for publication of high quality, original papers in chemical engineering.

Papers showing how research results can be used in chemical engineering design, and accounts of experimental or theoretical research work bringing new perspectives to established principles, highlighting unsolved problems or indicating directions for future research, are particularly welcome. Contributions that deal with new developments in plant or processes and that can be given quantitative expression are encouraged. The journal is especially interested in papers that extend the boundaries of traditional chemical engineering.

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- Process equipment characterisation
- Process modelling, simulation and optimisation

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- Reactive flow
- Turbulent flow
- Microfluidics
- Multiphase flow
- Computational fluid dynamics
- Porous media flow
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- Complex fluids
• Non-Newtonian fluids
• Flow visualization

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• Multicomponent mass transfer
• Simulation of heat and mass transfer processes
• Simultaneous heat and mass transfer

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• Fundamental properties of interest to processing of materials
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• In-line measurement and control of material processes
• Morphological development processes
• Pre-processing, shaping, multi-layering and finishing of final product form
• Product design based on chemical engineering tools
• Structure-function relationships in products and relevant systems
• Tailoring chemical products and materials for end-use applications

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• Design of particulate systems and processes
• Formation and synthesis of particulates
• Kinetics of particulate processes
• Measurement and characterisation of particulate systems
• Processing, handling and storage of powders and dispersions
• Product formulation and rheology

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• Design, modelling, operation and control of pharmaceutical (bio)reactors, unit operators and process systems used in the production of (bio)pharmaceuticals
• Application of process analytical technology in pharmaceutical product and process design and characterisation
• Pharmacokinetic and pharmacodynamic modelling
• Design, characterisation and modelling of drug delivery systems

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• Process modelling, simulation and optimization
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• Techno-economic analysis

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