



Challenges in the Numerical Modelling of the CO₂-Transport in Pipelines

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The burning of Fossil fuels is the main contributor to climate change.

At the same time, fossil fuels drive economic growth, and global demand is likely to remain high for years to come. But the amount of CO₂ and other greenhouse gases being released into the atmosphere by major emitters such as coal-fired power plants, oil refineries, steel mills and cement plants will continue to be so massive that society needs to come up with additional methods to reduce atmospheric CO₂ levels. One such method is called Carbon Capture and Storage (CCS), which involves capturing CO₂ from coal-fired power plants etc., transporting the CO₂, and storing it in a storage site such as a depleting offshore oil field. Currently pipelining is the solution to transport the voluminous CO₂ emissions from large power plants. In the frame of the CO₂-process chain the material transport through pipelines, elbows and complex geometries of the CCS-process chain is playing a central role.