

On the multicomponent reactive flows in moving domains.

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We present the existence of global-in-time weak solutions to the multicomponent reactive flows inside a moving domain whose shape in time is prescribed. The flow is governed by the 3D compressible Navier-Stokes-Fourier system coupled with the equations of species mass fractions. The fluid velocity is supposed to fulfill the complete slip boundary condition, whereas the heat flux and species diffusion fluxes satisfy the conservative boundary conditions. The existence of weak solutions is obtained by means of suitable approximation techniques.