

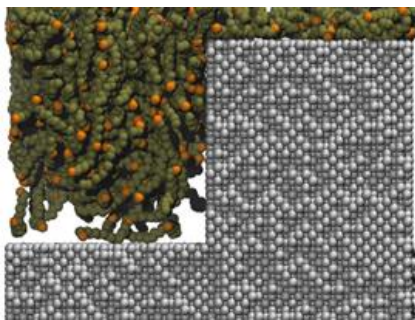
Institute of Fluid Science

Molecular Heat Transfer Lab.

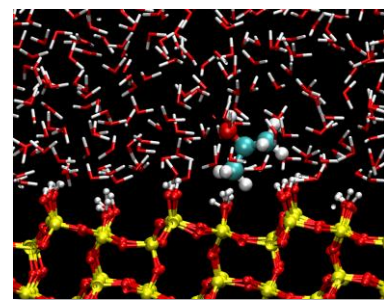
Finemechanics Course Taku Ohara, Professor
Donatas Surblys, Assistant Professor
Matsubara Hiroki, Specially Appointed Assistant Prof

We are aiming at molecular design of thermal fluids based on the molecular-scale understanding and control of the thermal flow phenomena.

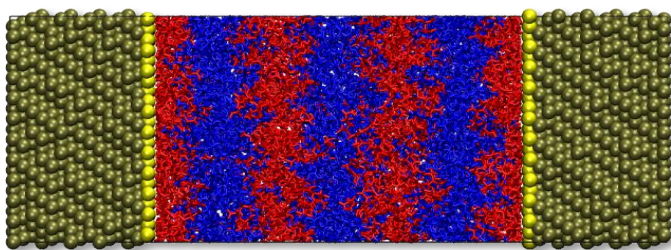
Keywords: Molecular dynamics, Thermal and fluid engineering, Transport phenomena of mass/momentum/energy, Interface physics and chemistry, Interface modification and control, Nano-bio technology, Power devices, Numeric simulation



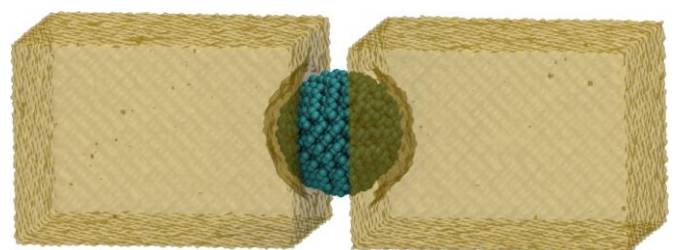
Thermal energy transfer between nano structures and polymers



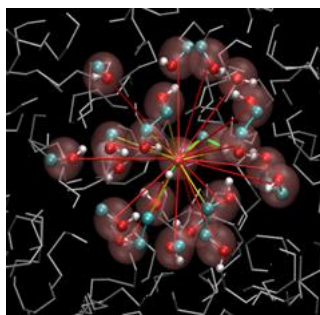
Nanoscale transport at semiconductor interfaces



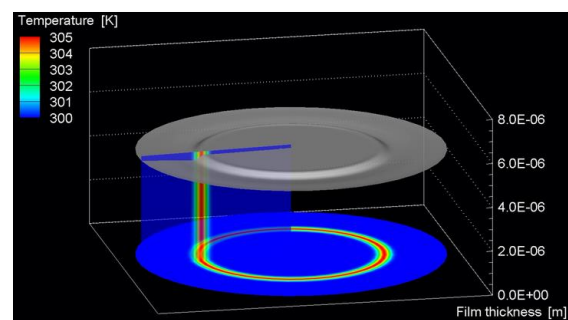
Thermal transport properties of layer by layer membranes.



Change in thermal properties due to nano-diamonds



Heat paths in ethylene glycol



Thin film coating

Molecular Heat Transfer Lab.



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Macroscale