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講題: Nanoparticle Hydrodynamics in Vascular Targeted Drug Delivery

主 持 人: 林哲宇助理教授

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Nanoparticle Hydrodynamics in Vascular Targeted Drug Delivery

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演講摘要:

The use of ligand-functionalized nanocarriers that bind to specific receptor proteins is gaining translational prominence in vascular targeted drug delivery. Owing to the wide spectrum of time and length scales involved in the hemodynamics and nanocarrier-endothelium binding landscape, a unified theoretical framework bridging the microscale many-body hydrodynamic interactions and the nanoscale particle-cell adhesion would be essential for the tailored design of functionalized nanocarriers. In this talk, I will present such a theoretical formalism for studying the particulate distribution within a vessel as well as nanocarrier-cell adhesive dynamics. The analyzed results and the corresponding impacts on the targeting efficacy will also be discussed.