

ENSHEATHED FALLING PARTICLE

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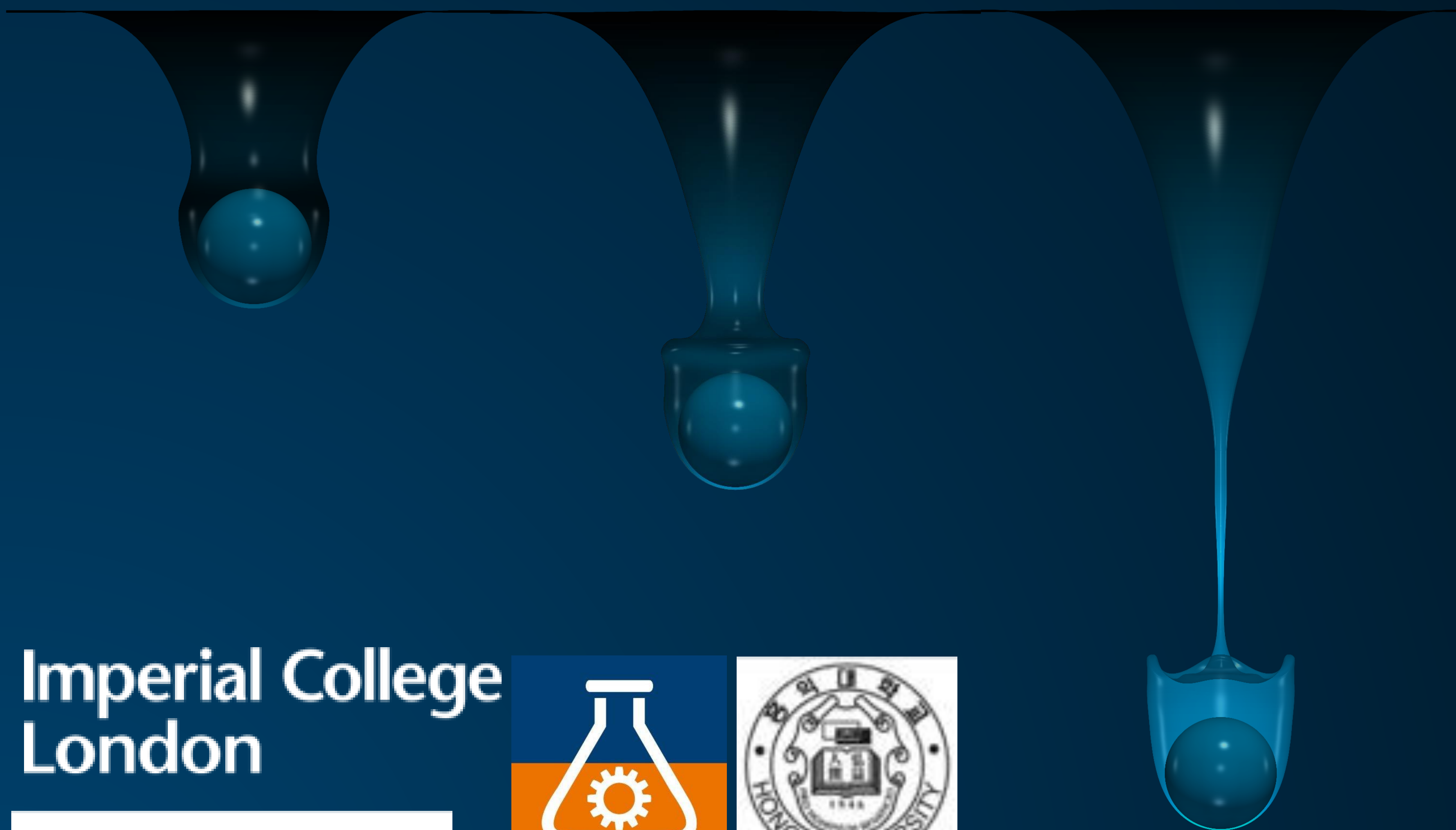
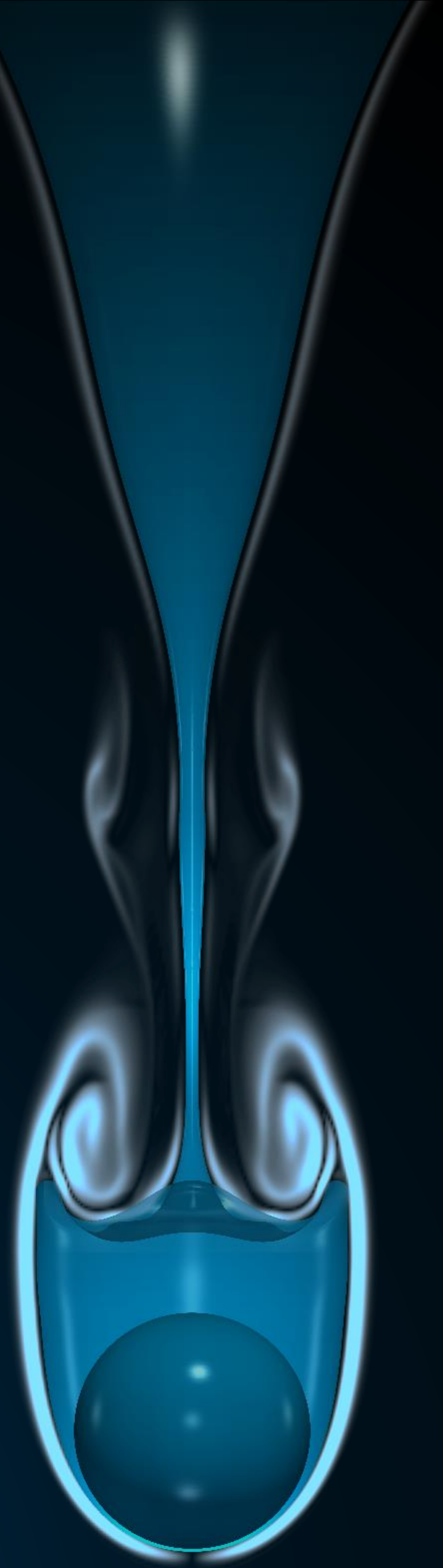
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We present three-dimensional Direct Numerical Simulations of a falling particle across an oil-water interface. An interfacial tail gradually forms past the particle, which is connected to the initial interface position.

Over time, the tail thins closer to the particle, which would cause the interface to pinch off and retract. The particle would then continue to settle, encapsulated by a layer of oil.

The presented color map depicts the vortical structures which arise due to the density and viscosity variations between the oil and the water phase.



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