

EXAMPLES OF ELECTROHYDRODYNAMIC COUPLING

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Both electric current and liquid flow in any liquid electrolyte system can be driven by either voltage or pressure gradient. This coupling between electric and hydrodynamic behavior plays an important role in a large number of physical phenomena. In the talk, several typical examples will be considered, including liquid penetration through a gel, DNA motion in a channel, and DNA capture into a nanopore. Main attention will be paid to the understanding the underlying physics.