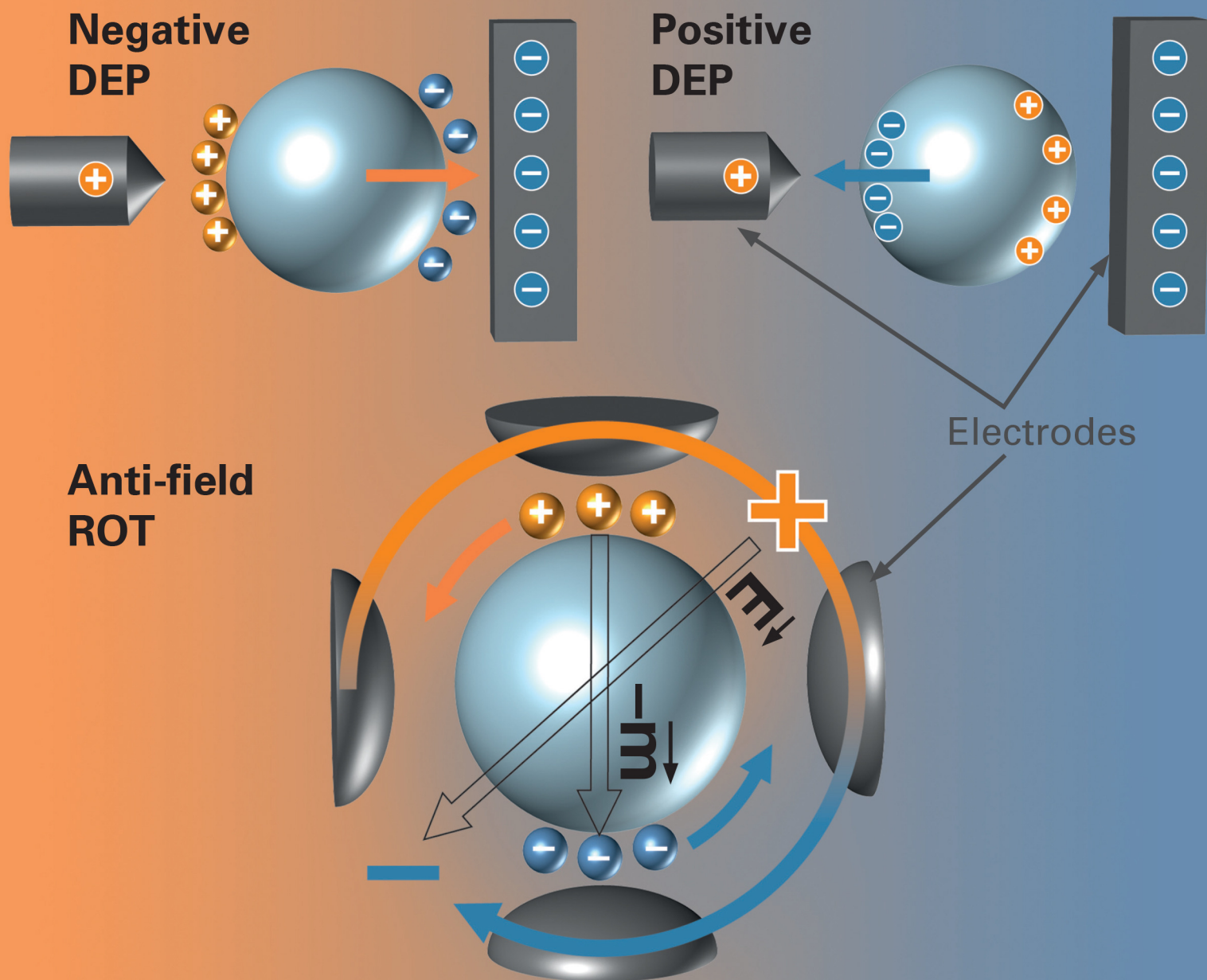


# ELECTROPHORESIS

11'18

Liquid Phase Separation Techniques  
Microfluidics • Nanoanalysis • Proteomics



## Abstract

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The cover picture shows the interrelation of the dielectrophoresis (DEP) and electrorotation (ROT) AC-electrokinetic effects for a cell model in the membrane dispersion range. The “trick” of ROT is to translate the temporal phase shift between the induced dipole moment ( $\vec{m}$ ) and the external field ( $\vec{E}$ ) observed in linear inhomogeneous AC fields (top) into a spatial phase shift in circular fields (bottom). Snapshots of the induced charges illustrate the interactions with the external fields, generating DEP forces and ROT torques.