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An analytical model for enantioseparation process in capillary electrophoresis

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***Highlights (for review)**

Highlight

-An analytical model of enantioseparation in capillary electrophoresis experiment is proposed.

-The mobilities of the enantiomers are analyzed from the evolution of the distributions of particles in the capillary.

-The signals in a capillary electrophoresis experiment are reproduced and the behavior of enantioseparation with chiral concentration is in accordance with the well known Wren and Rowe formula.

-A capillary electrophoresis experiment for the enantiomeric separation of the (±) chlorpheniramine/ □-β-cyclodextrin system is studied and reproduced by both the analytical model and kinetic Monte Carlo simulation.