Diffusion of Rod-like Nanoparticles in Non-adhesive and Adhesive Porous Polymeric Gels

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Highlights

- **The first theoretical model developed to investigate the diffusion behavior of rod-like NPs in non-adhesive and adhesive polymer solutions.**
- **Extending the obstruction-scaling model to describe the diffusion of non-spherical solute particles in non-adhesive polymeric solutions.**
- **Incorporating the mean first passage time (MFPT) theory into the obstruction-scaling model to describe the diffusion of nanoparticles in adhesive polymeric solutions.**