

# **Quantifying two-dimensional diffusion anisotropy in liquid crystals using dc electrolysis**

**Jay Wadhawan**

*Department of Physical Sciences, University of Hull, Cottingham Road, Hull HU6 7RX, United Kingdom.*

Theory is presented for the case of two-dimensional diffusion anisotropy in axiosymmetric systems, which advantageously and indirectly, affords a unified theory of diffusive mass transport at planar, microdisc and cylindrical electrodes in isotropic media. A strategy is proposed to determine the extent of the diffusion anisotropy in experimental data; proof-of-concept is realised via a model lamellar system.