大阪府立大学 工学域 電子物理工学課程
第９７回電子物理工学セミナー

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The origins of optical activity in chiral plasmonic nanomaterials

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Chirality, the absence of mirror symmetry, is a ubiquitous property in nature. An optical signature of chirality is the asymmetric interaction of circularly polarised light, a phenomenon known as optical activity. For naturally occurring chiral materials only very small optical asymmetries (activity) are observed. The level of optical asymmetry is amplified by orders of magnitude in artificially engineered chiral nanomaterials (metamaterials). The unique capabilities of chiral metamaterials are utilised to achieve highly efficient polarisation control, ultrasensitive characterisation of biomaterials and negative refractive index materials. In this talk the origins of optical activity in chiral metamaterials will be discussed.

電子物理工学課程 図書委員 安田 雅昭