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【209】 Advantages and drawbacks of a back-scattering Mueller polarimetric setup comparing with surface imaging one

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Mueller polarimetry is a strong experimental tool for characterizing the optical properties of samples. Nowadays, polarimetry-based devices represent one of the most promising directions for recognizing various types of a cancer during surgical procedures for example. While polarimetric reflection surface imaging is popular, we focus on the back-scattering setup, where the light penetrates deeply into highly scattering media. This enables the study of the internal structure of a sample rather than just its surface, making it useful for cases beyond histological analysis. In the presentation we will discuss the advantages and drawbacks of each setup's configuration based on the experimental study of a human brain sample.

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