

From theory to practice: the broadening role of polydimethylsiloxane phantoms as an intermediary between model validation and instrument performance testing (Conference Presentation)

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ABSTRACT

Polydimethylsiloxane (PDMS) has been a popular medium to fabricate tissue simulating optical phantoms. Recently, its use has significantly expanded in instrument calibration and performance testing, validation of advanced models of light transport of complex tissue geometries and evaluation of novel measurement modalities. To meet these demands, fabrication methods of these optical phantoms have become more refined and its structure and constituent components (i.e. dyes and scattering agents) have evolved to better mimic optical properties of tissue spanning both visible and near infrared regimes. We present efforts at the Beckman Laser Institute that address these challenges through PDMS phantoms.

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