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## Article



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Spectroscopic ellipsometric characterization of organic films obtained via organic vapor phase deposition

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**Abstract** Thin films of *Tris*(8-hydroxyquinoline)-aluminum(III) ( $\text{Alq}_3$ ) and *N,N'*-Di-[(1-naphthyl)-*N,N'*-diphenyl]-(1,1'-biphenyl)-4,4'-diamine ( $\alpha$ -NPD) were deposited on large-area silicon substrates by means of the recently developed organic vapor phase deposition (OVPD) method. Variable-angle spectroscopic ellipsometry was used to measure the optical constants of OVPD  $\text{Alq}_3$  and  $\alpha$ -NPD layers in the 0.8–5 eV energy range. The absorption onset which defines the lower limit of the optical band gap was found to be at  $\sim 2.65$  eV and  $\sim 2.9$  eV for  $\text{Alq}_3$  and  $\alpha$ -NPD, respectively. Additionally, the thicknesses of the layers as well as the thickness profiles of the organic thin films were determined along the 8 cm diameter of the wafers. The thickness analysis revealed large-area uniform deposition of the films.

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