

Accepted Manuscript

Research paper

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PII: S0009-2614(18)30120-9

DOI: <https://doi.org/10.1016/j.cplett.2018.02.035>

Reference: CPLETT 35447

To appear in: *Chemical Physics Letters*

Received Date: 16 January 2018

Accepted Date: 13 February 2018

Please cite this article as: C. Örek, F. Aslan, B. Gündüz, O. Kaygili, N. Bulut, Comparison of experimental photonic and refractive index characteristics of the TBADN films with their theoretical counterparts, *Chemical Physics Letters* (2018), doi: <https://doi.org/10.1016/j.cplett.2018.02.035>

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**Comparison of experimental photonic and refractive index characteristics of the
TBADN films with their theoretical counterparts**

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Abstract

Photonic properties and refractive indexes of the TBADN films were investigated with various experimental and theoretical methods. The effects of the film thicknesses on the photonic properties of the TBADN films were examined. It was found that while the optical band gap of the TBADN film decreases with increasing film thickness, the refractive indexes exhibit a normal dispersion behavior for both experimental and theoretical techniques. This study shows that the most suitable optoelectronic parameters for optoelectronic devices can be achieved with film thicknesses. The TBADN molecule was found to have a lower refractive index in the chloroform solvent.

Keywords: Anthracene, TBADN films, refractive index, photonic properties, film thickness.

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