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Correlation between stoichiometry and properties of scandium oxide films prepared by reactive magnetron sputtering

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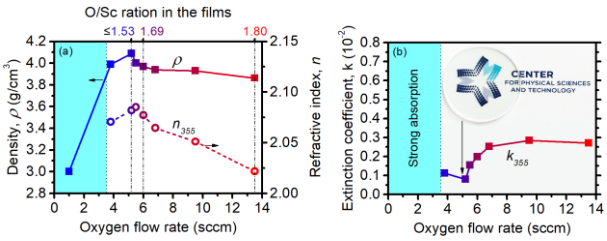
Garphical abstract



Highlights

- Scandium oxide films prepared by reactive magnetron sputtering
- Correlations between scandium oxide stoichiometry and properties are found
- Highest density, highest refractive index, largest bandgap and lowest extinction coefficient observed for stoichiometric scandium oxide film
- Scandium oxide films had low compressive stress