



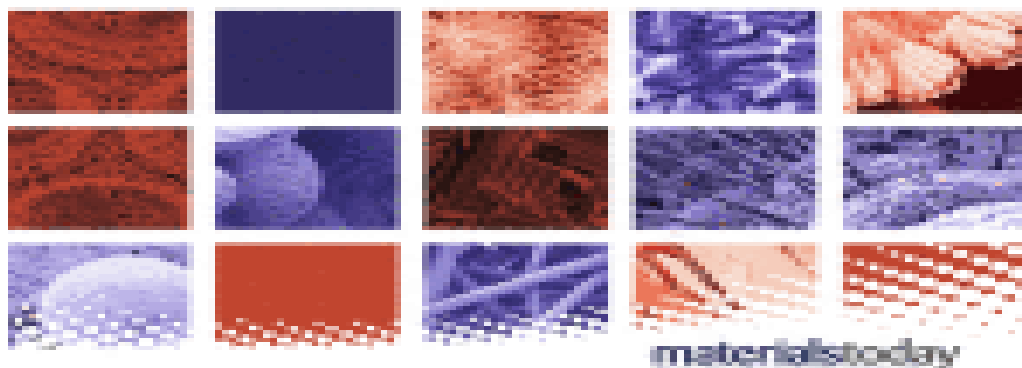
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Partial oxygen effect on the optical behaviour of AlCu₂O thin films using the reactive sputtered method

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films with a partial variation of O₂ pressure. The prepared films, Al-Cu₂O were characterised using XRD, FTIR and optical studies. The XRD revealed that the film was p-type semiconductor and polycrystalline one. The presence of Cu₂O and un-oxide copper layer structure were detected at 2θ = 36.8° and 42.4° in the (1 1 1) plane. The variation of crystal size was traced between 26.48 and 7.642 nm with the help of FWHM by the variation of partial pressure of O₂. The FTIR gives that the peaks corresponding to characteristics stretching modes of vibrations. The optical studies revealed the percent of transmission and E_g of Al doped Cu₂O films at different O₂ partial pressure. The present study mainly focused on the microstructural behaviour of as deposited films to impose in the photovoltaic devices and their applications.