Use of Cu–Ag bi-layer films in oxide/metal/oxide transparent electrodes to widen their spectra of transmittance

Titre	Use of Cu–Ag bi-layer films in oxide/metal/oxide transparent electrodes to widen their spectra of transmittance
Type de publication	Article de revue
Auteur	Bernède, Jean Christian [1], Cattin, Linda [2], Abachi, Tahar [3], Lare, Yendoubé [4], Morsli, Mustapha [5], Makha, Mohammed [6]
Editeur	Elsevier
Type	Article scientifique dans une revue à comité de lecture
Année	2013
Langue	Anglais
Pagination	187–189
Volume	112
Titre de la revue	Materials Letters
ISSN	0167-577X
Mots-clés	Cu/Ag metal bi-layer [7], electrical properties [8], ITO free electrode [9], Physical deposition [10], Thin films [11], Transmittance [12], Transparent conductive electrode [13]
Résumé en anglais	Original ZnO/Cu/Ag/MoO_3 multilayer structures were deposited under vacuum. The optical transmittance spectrum of these structures is significantly broadened by using a double layer as metal interlayer. While the thickness of Ag was 6 nm, that of Cu was used as parameter. The highest averaged transmittance, 88% between 400 and 700 nm is obtained with the structure ZnO (20 nm)/ Cu (3 nm)/Ag (6 nm)/ MoO_3. However, a better factor of merit is achieved, $\Phi M=16\times10^{-3}$, when the Cu thickness is 4 nm, making that these innovative ZnO/Cu/Ag/MoO_3 structures are very promising for use as substitute to ITO electrodes.
URL de la notice	http://okina.univ-angers.fr/publications/ua12232 [14]
DOI	10.1016/j.matlet.2013.09.039 [15]
Lien vers le document	http://dx.doi.org/10.1016/j.matlet.2013.09.039 [15]

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