S7-1.5

Wettability of Highly Conductive ZnO:Ga:Cl CVT Ceramics with Various Ga Content

G.V. Colibaba[1,2], N. Costriucova[2], D. Rusnac[1,2], S. Busuioc[3] and E.V. Monaico[3]
[1] *Moldova State University, Chisinau, Republic of Moldova*
[2] *Institute of Applied Physics, Chisinau, Republic of Moldova*
[3] *Technical University of Moldova, Chisinau, Republic of Moldova*

ZnO:Ga:Cl ceramics were sintered using chemical vapor transport technique. Ga content was varied in a range of 0 – 10 mol %. The wettability of unpolished and polished surface of ZnO:Ga:Cl ceramics was investigated. The polished and etched surface of ZnO ceramics is in a hydrophilic state. The presence of Ga impurity leads to a strong increase in the water contact angle to 131°. This behavior is attributed to a high concentration of free electrons, which suppress the formation of intrinsic surface defects acting as traps for water molecules. Air pockets on unpolished surfaces of ZnO:Ga:Cl ceramics are an additional factor that increases the water contact angle.