

Enseignante: Souaad DOUAFER

Grade : MCB

Département de physique, Faculté des sciences exactes

Université Abderrahmane Mira, Béjaia

## Résumé de la conférence ICSDE 2017

International Conference on Smart Digital Environment (ICSDE 2017) aims to bring together professional, experts and researchers working on Digital Technology and Environment. The Organizing Committee invites you to submit papers, in particular the technological advances and research results of theoretical and experimental. ICSDE provides authors with an outstanding opportunity for networking and presenting their work at a top quality international event which will be held at Rabat, Morocco.

I'm participated to this conference by poster communication entitled "Dielectric and Optical Characterization of the New Material  $\text{LiMn}_2\text{O}_4$  for the Use of Generation of Electrons" to explain the following points that's:

- The physical properties and photoelectrochemical characterization of the spinel  $\text{LiMn}_2\text{O}_4$ , elaborated by nitrat route, have been investigated for the generation of electrons under visible light.
- The forbidden band is found to be 1.57 eV and the transition is directly allowed.
- The electrical conduction occurs by small polaron hopping with activation energy of 0.21 eV.
- $\text{LiMn}_2\text{O}_4$  has been characterized photoelectrochemically to assess its activity as bias-free  $\text{O}^{2-}$  photocathode.
- The flat band potential  $V_{\text{fb}}$  ( $-0.49V_{\text{SCE}}$ ) and the electron density  $N_{\text{D}}$  ( $1.87 \times 10^{19} \text{ cm}^{-3}$ ) were determined, respectively, by extrapolating the linear part to  $C^{-2} = 0$  and the slope of the Mott Schottky plot.

concerned

