



University Mohamed El Bachir El IBRAHIMI of Bordj Bou Arreridj
Faculty of Sciences and Technology
Department of Matter Sciences
Laboratory of Materials Physics, Radiation and Nanostructures



Certificate of Participation

This is to certify that

Noubeil Guermat

Has participated in the National Seminar of Physics, Chemistry, and Their Applications **Webinar (NSPCA'23)** which has been held in the Faculty of sciences and technology, University Mohamed El Bachir El Ibrahimy of Bordj Bou Arreridj, Algeria. March 6th-7th 2023 and have given the following Poster presentation:

Impact of Nickel (Ni), Cobalt (Co) and Molybdenum (Mo) doping on structural, optical and electrical properties of zinc oxide (ZnO) thin films

With co-authors: Warda Darenfad , Kamel Mirouh

NSPCA'23 *chairman*



Head of the Laboratory

