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Ministry of Higher Education and Scientific Research
Kasdi Merbah Ouargla University
Department of Chemistry



1st international conference on chemical matters and environment preservation
IC-CMEP'22 March 09-10, 2022, Ouargla, Algeria (virtual conference)

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Certificate of participation

The organizing committee of the 1st International Conference on Chemical matters and Environment Preservation
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**Studies on structural, morphological, optical, luminescence and electronic properties of Ni-doped ZnO nanopowder
by coprecipitation method**

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Studies on structural, morphological, optical, luminescence and electronic properties of Ni-doped ZnO nanopowder by co-precipitation method

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Abstract.

In this work, pure and Ni-doped ZnO nanoparticles (NPs) with concentration of Ni (6.25%) were successfully prepared by using co-precipitation method [1]. Among TM, nickel is very significant element which has a similar ionic radius as that of Zn. Literature studies show that Ni doping into ZnO matrix can enhance its various properties [2, 3]. Zinc acetate dihydrate [Zn (CH₃COO)₂ 2H₂O], nickel acetate dihydrate [Ni (CH₃COO)₂ 2H₂O] and sodium hydroxide solution [NaOH] were used as precursors. For getting homogeneous solution, stoichiometric amount of zinc and nickel acetate were dissolved in methanol, after stirred continuously on a magnetic stirrer at room temperature. For raising the pH of the obtained solution to ~9, small amount of sodium hydroxide solution [NaOH] was added drop by drop. The precursor solution is then stirred again until the liquid solution turns into a gel. After gel formation, the beaker was transferred on the hot plate at 500°C for 1h. The obtained sample yield in the form of loose powder was then finely grounded by agate mortar and pestle. The prepared samples in powder form were characterized by X-ray diffraction spectroscopy (XRD), Scanning Electron Microscopy (SEM), Ultraviolet–visible spectroscopy (UV-Vis), Photoluminescence (PL) and Fourier transform infrared spectroscopy (FTIR). The obtained results have been discussed and compared with those from other sources whatever possible.

Keywords: Co-precipitation method, ZnO NPs, PL, Ni Defects, FTIR, SEM.

References

1. Han, D.; Yang, S.; Yang, J.; Zou, P.; Kong, X.; Yang, L.; Wang, D.J.N. "Synthesis of Fe₃O₄ nanoparticles via chemical coprecipitation method: modification of surface with sodium dodecyl sulfate and biocompatibility study". N. Letters. 8(4), 335-339 (2016).
2. Jain, S.; Karmakar, N.; Shah, A.; Shimpi, N.G. "Development of Ni doped ZnO/polyaniline nanocomposites as high response room temperature NO₂ sensor". J.M.S. E. B 247, 114381 (2019).
3. Abbasi, F.; Zahedi, F.; Yousefi, M.H. "Fabricating and investigating high photoresponse UV photodetector based on Ni-doped ZnO nanostructures ". J.O.C.482, 126565(2021).

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Ministry of Higher Education and scientific Research

General Direction For scientific and technological development



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IC-CMEP'22 March 09 – 10, 2022, ALGERIA

Virtual Presentation



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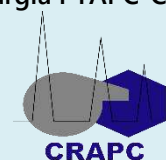
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Conference program

1st International conference on Chemical matters and environment preservation
IC-CMEP'22 March 9 – 10, 2022, ALGERIA

Conference Day 1 : Wednesday March 09, 2022		Time GMT+1
Opening ceremony	General Conference Chair Dr. HADEF Derradji, Univ. Ouargla (Algeria) https://meet.google.com/yyf-cqgu-hap	08 :30
	Pr. BECHKI Djamel, Dean of Mathematics & Matter Sciences Faculty (Algeria)	08 :45
	Pr. HALILAT Med Tahar, Ouargla University Rector (Algeria)	08 :55

Keynote speakers session

Session Chair Dr. BELFAR Med Lakhdar Ouargla University, Algeria		
Prof. BELKHALFA Hakim PTAPC-CRAPC- Ouargla	https://meet.google.com/yyf-cqgu-hap	09 :00
Prof DEKMOUCHE Messaouda Ouargla University, Algeria	https://meet.google.com/yyf-cqgu-hap	10 :00
Session Chair Dr. SAIDAT Mostapha Ouargla University, Algeria		
Prof. LEGHSEIR Belgacem Université Badji Mokhtar Annaba	https://meet.google.com/yyf-cqgu-hap	11 :00
Prof. MOUSSAOUI Younes Universté Gasfa tunisie	https://meet.google.com/yyf-cqgu-hap	11 :30
Session Chair Dr. Mazouz Mihoub Ouargla University, Algeria		
Prof. LANEZ Touhami Eloued University, Algeria	https://meet.google.com/yyf-cqgu-hap	12 :00
Prof ZENKHRI Louiza Ouargla University, Algeria	https://meet.google.com/yyf-cqgu-hap	12 :30

	Session Chair	Session Topic	Start discussion	Link (Google meet)
1	Pr. MOUSSAOUI Yassine	Eliminate environmental pollution (air, water and soil).	14:00	yacine.moussaoui@gmail.com
2	Dr. NDJIMI Mohammed Said	Nanomaterial's and the environment		nedjimi2011@gmail.com
3	Dr. Zerrouki hayat	Green chemistry and the environment Wastewater depollution.		zerroukih2020@gmail.com
4	Dr. Chaouch khaoula	Treat waste and preserve the environment		khaoula.chaouche@yahoo.fr
5	Dr. Rahmani zhor	Computational materials technique.		saouliibtissam@yahoo.fr
6	Dr. Ben Ali Moustapha	Crystalline structure modeling and optimization		meet.google.com/mjg-gded-sqg
7	Dr Saidat mustapha	Simulation and modeling of the physical and chemical properties of materials.		https://meet.google.com/yf-cqgu-hap
8	Dr. DAKMOUCHE Messaouda	Plants for the environment.		meet.google.com/eyb-hcdn-dpx
9	Dr. BOUZIANE Mebarka	Design of a new material synthesis technique.		bmebarka@yahoo.fr
10	Dr. Allaoui messaouda	Maters for optoelectronics.		https://meet.google.com/itf-vrvp-udp
11	Dr. BEN ZAHI Khadidja	Dielectric and magnetic maters		https://meet.google.com/oyo-ijfb-obb
12	Dr Allaoui abdelfetteh	Characterizations and applications of materials.		allaoui313@gmail.com
13	Dr Allaoui abdelfetteh	Materials for renewable energy.		allaoui313@gmail.com
14	Dr. SMARA Ouanissa	Organic and inorganic maters		ouanissasm@gmail.com
16	Dr. Mkhalfi tarek	Waste water depollution		https://meet.google.com/mzn-yfhh-vbs
17	Dr. Zaoui manel	Medical applications of new biomaterials and Nano-biotechnology.		https://meet.google.com/vwa-yycu-ocd
18	Dr. Hamada djamilia	Nanotechnology and Nanomaterials.		https://meet.google.com/dod-iwzu-qks

Conference Day 2 :Thursday March 10 , 2022

closing Session

Session Chair

Prof ZENKHRI Louiza, Ouargla University, Algeria

Google meet Link

Or

Presentation Youtube Link

09 :00

Closingremarks

09 :30