

# ARUN BHUJEL

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## EDUCATION

**Texas Tech University** Lubbock, Texas, USA  
*Ph. D. Chemistry* Fall 2021-contd.

**Tri-Chandra Multiple Campus** Kathmandu, Nepal  
*M.Sc. Chemistry* 2015-2017

- 3.70/4.0, Tribhuvan University  
Coursework: Physical Chemistry, Advanced Electrochemistry, Organic and Inorganic Chemistry, Quantum Chemistry, Molecular Spectroscopy, Advanced Solid-State Chemistry

*B.Sc. Chemistry* 2011-2014

- 67.29%  
Coursework: General Chemistry, Mathematical Analysis, General Physics

## WORK EXPERIENCE

**Texas Tech University** Lubbock, Texas, USA  
*Teaching Assistant* 2021-contd.

**Balaju School of Engineering and Technology** Kathmandu, Nepal  
*Chemistry Lab Instructor* 2019-2021

- Conducted lecture and Practical Classes for Proficiency Certificate Level- Ophthalmic Sciences.
- Assisted in administrative works.

**Euro Kingdom School** Kathmandu, Nepal  
*Senior School Science Teacher* 2018-2021

- Taught Science and Mathematics to middle school students and high school freshmen.

## RESEARCH EXPERIENCE

**Texas Tech University** Lubbock, Texas

- Working on developing and using Chirped Pulse Fourier Transform Microwave Spectrometer

**Tri-Chandra Multiple Campus, Tribhuvan University** Kathmandu, Nepal  
*Master's Dissertation* 2018-2019

- Dissertation Topic:  
*“Nanosized Zirconium Oxide (Zirconia, ZrO<sub>2</sub>): Synthesis, Characterization and Antimicrobial Study”*
- Carried out the fabrication of Zirconia nanoparticles, characterized the obtained nanoparticles using various instruments- XRD, SEM, TEM, SAED, FTIR, UV-Vis Spectroscopy, EDX and Raman Spectroscopy- and finally studied its antimicrobial properties.
- Synthesized and characterized Zirconia nanoparticles successfully with particle size ranging from 28.3 nm to 33.3 nm.

## SYMPOSIUM/SEMINAR ATTENDED

**Jawaharlal Nehru Centre for Advanced Scientific Research** Bengaluru, India  
*Participant* 2019

- Conference on *“International Winter School 2019 on Frontiers in Materials Science”*
- P87: Synthesis of Zirconium oxide (Zirconia, ZrO<sub>2</sub>) nanoparticle by wet chemical precipitation method and their microbial study, presented on Winter School 2019, Arun Bhujel, Bibek Sapkota, Sitaram Bhattarai and Surendra K. Gautam.

Asian Society for Colloid and Surface Science (ASCASS)

Lalitpur, Nepal

Participant

2019

- Conference on “*The 8th Asian Conference on Colloid & Interface Science (ACCIS 2019)*”
- P55: Synthesis of Zirconium oxide (Zirconia, ZrO<sub>2</sub>) nanoparticles by wet chemical precipitation method and their microbial study, presented at Winter School 2019, Arun Bhujel, Bibek Sapkota, and Surendra K. Gautam.

Tri-Chandra Multiple Campus, Tribhuvan University

Kathmandu, Nepal

Participant

2017

- Symposium on “*Nanoparticles Fabrication and its Applications*” by Department of Chemistry

## JOURNALS/PAPERS PUBLISHED

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J. Bibechana, 2021, Vol. 18(1), 1-9

- Arun Bhujel, Bibek Sapkota, Ram Lochan Aryal, Bhoj Raj Poudel and Surendra K. Gautam, “[Insight of Precursor Concentration, Particle Size and Band Gap of Zirconia Nanoparticles Synthesized by Co-precipitation Method](#)”

J. Nepal Chemical Society, 2021, Vol. 42(1), 103-110

- Arun Bhujel, Krishna Wagle, Bishow Regmi, Bibek Sapkota, Bhoj Raj Poudel and Surendra K. Gautam, “[Utilization of Charred Water Hyacinth \(Jalkumvi\) as Biosorbent for Removal of Calcium Ion from Aqueous Solution](#)”

J. Nepal Chemical Society, June 2020, Vol. 41(1), 53-58

- Surendra K. Gautam, Bibek Sapkota, Arun Bhujel and Sitaram Bhattarai, “[Estimation of Particle Size and Band Gap of Zinc Oxide Nanoparticles Synthesized by Chemical Precipitation Method](#)”

J. Nepal Chemical Society

- Manish Bishwokarma, Arun Bhujel, Manish Baskota and Rajesh Pandit, “[Green Synthesis of Zirconia \(ZrO<sub>2</sub>\) Nanoparticles using Curcuma Longa Extract and Investigation of Compressive Strength of Epoxy resin/ZnO<sub>2</sub> Nanocomposites](#)”

## SKILLS & INTERESTS

**Skills:** Understanding of instrumentation of Microwave Spectrometer; Analysis of XRD spectra, FTIR spectra, SEM, TEM and SAED images, EDX spectra, Raman images; OriginPro application; ImageJ application; UV- Spectroscopy; Microsoft office package; Adobe photoshop

**Interests:** Electrochemistry, Analytical Chemistry, Biochemistry, Spectroscopy, Catalysis, Fuel Cells, Nanomaterials, Material Chemistry, etc.