Zahid Abbas

Nationality: Pakistani

Date of birth: 01/09/1991

Gender: Male

Email address: zahidabbas1333@gmail.com

WORK EXPERIENCE

PhD in Chemistry

Italian National Research Centre (CNR) - Institute of Science and Technology for Ceramics (ISTEC) [01/11/2020 – Current]

City: Faenza

Country: Italy

Design, development and characterization of bioactive apatite scaffolds with the aim of enhanced mechanical performance for bone regeneration. Our strategy involves the preparation of "Ceramic Matrix Composites" by reinforcement of Fibers (Carbon, SiC, ZrO_2, Al_2O_3 ...), Second phase - Powders (SiC, ZrO_2, Al_2O_3), 3D-fibrous structure by pouring suspensions and Ion-doping (Sr, Mg) in hydroxyapatite. Furthermore, our project has been focused on physicochemical (pH, zeta potential) and rheological (viscosity, dynamic modulus) characterizations of hydroxyapatite-based slurries, obtained by varying some processing parameters e.g. powder calcination temperature, powder amount, dispersant amount.

SESE Teacher

Department of School Education [01/03/2018 – 01/10/2020]

City: Jhang

Country: Pakistan

High and Middle class teaching

Master (M.Phil. in Chemistry)

Centre of Agricultural Biochemistry and Biotechnology (CABB), University of Agriculture [01/09/2016 – 01/12/2018]

City: Faisalabad

Country: Pakistan

Green synthesis of Silver Nanoparticles using *E.Coli and B.Subtilus bacteria*. The evaluation of the antimicrobial activity of Ag Nano Particles against *gram-positive and gram-negative bacteria*

EDUCATION AND TRAINING

PhD. in Chemistry
ALMA MATER STUDIORUM - UNIVERSITÀ DI BOLOGNA [01/11/2020 – Current]

Address: Via Zamboni, 33, 40126 Bologna (Italy)
https://www.unibo.it/it
Thesis: ''Development of bioactive apatitic scaffolds with enhanced mechanical performance for bone regeneration''

M.Phil. in Organic Chemistry
UNIVERSITY OF AGRICULTURE [01/09/2016 – 01/12/2018]

Address: University Rd, Police Lines, 38000 Faisalabad (Pakistan)
http://www.uaf.edu.pk/
Thesis: "Optimization of physicochemical parameters for green synthesis of silver nanoparticles by using microorganism and evaluation of their antimicrobial potential"

BS (HONS) in Chemistry
GOVT. COLLEGE UNIVERSITY [01/08/2011 – 01/08/2015]

Address: Kotwali Rd, Gurunanakpura, 38000 Faisalabad (Pakistan)
https://gcuf.edu.pk/

Bachelor of Education
VIRTUAL UNIVERSITY [01/04/2018 – 01/10/2020]

Address: Shorkot , 35050 Shorkot (Pakistan)
https://www.vu.edu.pk/

LANGUAGE SKILLS

Mother tongue(s): **Urdu**

Other language(s):

English

LISTENING C1 **READING** C1 **WRITING** C1

SPOKEN PRODUCTION B2

SPOKEN INTERACTION B2

PUBLICATIONS

Toughening of Bioceramic Composites for Bone Regeneration
[2021]
https://www.mdpi.com/2504-477X/5/10/259

Abbas, Z., Dapporto, M., Tampieri, A., & Sprio, S. (2021). Toughening of Bioceramic Composites for Bone Regeneration. *Journal of Composites Science*, *5*(10), 259.

CONFERENCES AND SEMINARS

"Understanding human life history variation: sleep pattens, personality traits, relationship status, and hormones" Lecture by Dario Maestripieri, University of Chicago, USA

[Sala Rossa, Via Marsala 26, Bologna, Italy, 15/10/2020 – 15/10/2020]

“"Embodied Learning: Connecting Movement & Mathematics” Lecture by Dr. Erik Stern, Weber State University, USA

[Online on the zoom platform, 09/11/2021 – 09/11/2021]

“Energy generation in organic solar cells through the lens of multiscale simulations” Seminar by Gabriele D’Avino, CNRS & Université Grenoble Alpes, France

[Online on the zoom platform, 07/12/2021 – 07/12/2021]

"Rheological characterization of hydroxyapatite slurries for bone tissue regeneration"

[Department of Chemical, Pharmaceutical and Agricultural Sciences, University of Ferrara, Ferrara, 17/12/2021 – 17/12/2021]

XX Day of Chemistry of Emilia Romagna 2021 (XX GdC-ER 2021)

RESEARCH INTEREST

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  - Mechanical strength and biocompatibility of Bioceramic materials for bone regeneration.
  - Synthesis of hydroxyapatite and ion-doped hydroxyapatite.
  - Ceramic matrix composites i.e fiber-reinforced apatite and second-phase powder reinforcement in apatite.
  - Rheological characterizations of bioceramic slurries.
  - $CaPO_4$-based biomaterial for bone regeneration.

EXPERIMENTAL SKILLS

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  - Knowledge of bioactive and bioabsorbable porous ceramic materials for bone regeneration.
  - Experience with the synthesis of biomimetic hydroxyapatite and ion-doped hydroxyapatite.
  - Experience in the preparation and processing of bioceramics slurries.
  - Knowledge of reinforcement fibers (carbon, alumina) in apatite.
  - Knowledge of volume shrinkage and weight loss of apatite using Dilatometer and TGA.
  - Expertise in cutting and polishing of bioceramic materials.
  - Expertise in rheological characterization techniques i.e Bohlin rheometer, DLS Zetasizer and Zeta potential.
  - Experience with biomaterial analysis techniques i.e SEM, FTIR/ATR, UV-Vis Spectroscopy, ICP-AES and XRD.

ADDITIONAL INFORMATION

Certifications

- A course "**FROM IP MANAGEMENT TO TECHNOLOGY TRANSFER FOR BUSINESS"** by Prof**.** Pierluigi Reschiglian, University of Bologna, Italy, 2020-2021
- A course on "**BIOMATERIALS (6 CFU):** by Prof. Silvia Panzavolta, University of Bologna, Italy 2021-2022.
- Online course Nanotechnology: A Maker's Course from Duke University, NORTH CAROLINA, 2019
- Teachers Training; One-month teacher training under the Punjab government through Qaid-e-Azam Academy Lahore, 2018.
- Best Performance in academics from GCUF, 2014