

ZAKA ULLAH



Research Profile

<https://orcid.org/0000-0002-2321-8323>

Email

zaka.cssp@pu.edu.pk
mail2zaka@gmail.com

Tel

+92-333-9980556

Skype

talk2zaka

Present Address

Centre of Excellence in Solid State Physics, University of the Punjab, Quaid-i-Azim Campus, Lahore, Pakistan. 54590

Permanent Address

C/O Mohsin Furniture Shop, Mohallah Eid Gah, Tehsil Taunsa Sharif, District Dera Ghazi Khan, Punjab, Pakistan. 32100

Date of Birth

October 24, 1986

Nationality

Pakistani

Gender

Male

Marital Status

Single

Religion

Islam

Passport No.

CH2745942

Objective

I am directed to pursue the research work at the Centre of Excellence in Solid State Physics, University of the Punjab, Lahore, Pakistan, which could provide me opportunities to work with the expert researchers and distinguished scientists, and to initiate novel research projects at the institution to lead and train the early-stage researchers, so that I can get and deliver worthy experience and can contribute at my level best for the development of host institution, my country Pakistan and the humanity, and I can fulfil my dream to see Pakistan among the top research nations in the world.

Present Employment

2017 to Date Working as an **Assistant Professor** at Centre of Excellence in Solid State Physics, University of the Punjab, Lahore, Pakistan, since November 24, 2017:
<http://cssp.edu.pk/facultystaff.php>

Education

- 2013-2017** **PhD in Microelectronics and Solid State Electronics**
University of Chinese Academy of Sciences, Beijing, China
Thesis Title: Synthesis of Graphene Materials for Transparent and Flexible Electronics
- 2010-2012** **M.Phil. in Solid State Physics**
University of the Punjab, Lahore, Pakistan
Thesis Title: Synthesis and Characterization of Pb doped Sr-Ferrites
1st Division
- 2007-2009** **M.Sc. in Applied Physics**
University of Engineering & Technology, Lahore, Pakistan
Thesis Title: Attenuation of Laser Plasma X-Rays by Metallic Filters
1st Division
- 2005-2007** **B.Sc.**
Bahauddin Zakariya University, Multan, Pakistan
Subjects: Physics, Chemistry, Mathematics
1st Division

Research Experience

During my Ph.D., I worked on chemical vapor deposition (CVD) growth of graphene for diversity of electronic applications. I had a wide experience regarding growth of graphene, transfer of graphene, and designing and fabrication of graphene based electronic and optoelectronic devices. I have fabricated transparent and stretchable supercapacitors and skin-like strain sensors.

During my M.Phil., I used sol-gel auto-ignition technique to synthesis Pb-doped Sr-Ferrites for the investigation of various potential properties. I performed the measurements to use the material in high-frequency devices and as a dielectric in capacitors.

During my M.Sc., I worked on production, detection and filtration of soft X-rays. The X-rays were emitted from cadmium (Cd) and platinum (Pt) when Nd:YAG Laser was incident on these targets, and the rays were detected using PIN photodiode. I used aluminum (Al) and copper (Cu) foils with variety of thicknesses as filters to get the X-rays with desired energies and wavelengths.

Research Expertise

✚ I have a broad knowledge, training and experience of following equipment and characterization techniques, and can handle independently:

Optical Microscopy, SEM, EDS, XRD, Raman Spectroscopy, UV-Vis Spectroscopy, Four-Point Probe Apparatus, Electrochemical Workstation, Keithley Source Meter, Spin Coater, Sonicator, Furnaces, Vacuum Pumps, Apparatus for APCVD, LPCVD and PECVD, etc.

✚ I have a wide knowledge, but fair training and experience of following equipment to operate independently:

TEM, AFM, VSM, XPS, RF Magnetron Sputtering, Mass Spectrometer, MBE, Nd:YAG Laser, Excimer Laser, etc.

Research Interests

Materials Synthesis and Characterization, Carbon Materials, Graphene, 2D Materials, Thin Film Technology, Electronic Devices Fabrication, Transparent and Flexible Electronics, Printed Electronics, etc.

Research Publications

- **HEC Approved Supervisor:** <http://pu.edu.pk/page/detail/HEC-Approved-Supervisors.html>

Journal Papers: 27

Impact Factor: 66.137

Citations (as per Google Scholar): 97

Patent (Chinese): 1

The **Updated Research Profiles** can be found at following Web Addresses:

ORCID: <https://orcid.org/0000-0002-2321-8323>

Researcher ID: <http://www.researcherid.com/rid/Q-3157-2016>

Google Scholar: <https://scholar.google.com/citations?user=Kgd1RHoAAAAJ&hl=en>

International Conference Presentations

3. A Comparative Study of Graphene Growth by APCVD, LPCVD and PECVD (*Invited Talk*)
Zaka Ullah, Saira Riaz, Shahid Atiq, Qi Li, Muhammad Saleem, Muhammad Azhar, Liwei Liu, Shahzad Naseem
Presented in *International Conference on Solid State Physics, 2017 (ICSSP'17)* held on December 10-14, 2017 at **Centre of Excellence in Solid State Physics, University of the Punjab, Lahore, Pakistan.**
2. Graphene/Ag-NWs Electrodes for Highly Transparent and Extremely Stretchable Supercapacitor
Zaka Ullah, Qi Li, Rubing Wang, Qi Zeng, Weiwei Li, Liwei Liu
Presented in *The 7th IEEE International Nanoelectronics Conference 2016 (IEEE INEC 2016)* held on May 9-11, 2016 at **University of Electronic Science and Technology of China, Chengdu, China.**
1. Influence of A-site Pb substitution on Structural and Magnetic Properties of Sr-Hexaferrites
Zaka Ullah, Shahid Atiq, Murtaza Saleem, Shahzad Naseem,
Poster presented in ***International Conference on Condensed Matter Physics and Engineering (ICCMPE-12)***, held on December 27-29, 2012 at **Bahauddin Zakariya University, Multan, Pakistan.**

Computer Skills towards Scientific Research

- ✚ I am skilled in following **Computer Software** which can be used for Scientific Research:
L-Tex, Microsoft Office, EndNote, MDI Jade, Cell, MathType, Adobe Acrobat, Origin, AFM Nanoscop, NanoFit, etc.
- ✚ I have reasonable command on following **Computer Software** which can be used for Scientific Research:
MATLAB, Mathematica, ChemDraw, Xpert Highscore, Adobe Photoshop, Corel Draw, Edraw Max, etc.

Member of Editorial Board and Reviewer of Scientific Journals

- Member of Editorial Board of **International Journal of Engineering Works**
- Reviewer of **Carbon (IF: 7.082)**
- Reviewer of **Journal of Materials Science (IF: 2.993)**
- Reviewer of **Materials Letters (IF: 2.687)**
- Reviewer of **Journal of Materials Science: Materials in Electronics (IF: 2.324)**

Other Particulars

- Won a **Research Grant** (under Startup Research Grant Program) of value **~0.5 million PKR** from HEC for IPFP Project at Centre of Excellence in Solid State Physics, University of the Punjab, Lahore, Pakistan, on April 16, 2018.
- Won **CAS-TWAS President's Fellowship** for PhD study in China during September 2013 to July 2017
- Attended **2016 Summer School on Frontier and Interdisciplinary Science** during July 25-31, 2016, organized by University of Chinese Academy of Sciences, Beijing, China
- Attended **2nd One Day Workshop on Young Researchers' Skill Development and NAYS Emerging Ideas Conference (NAYS-EIC)**, held on January 07, 2012 at University of the Punjab, Lahore, Pakistan
- Life Member of Pakistan Institute of Physics (**PIP**)
- Life Member of National Academy of Young Scientists (**NAYS**)

References

References will be furnished on demand.