

CURRICULUM VITAE

Name: Muhammad Ishaq Kakar
Designation: Professor and Acting Director
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Academic Qualifications

- ❖ **Ph.D.:** University of Baluchistan, Quetta, Pakistan (2011).
Ph.D. Thesis Topic: “Petrology, Geochemistry and Tectonic Setting of the Muslim Bagh Ophiolite, Balochistan, Pakistan”.

Awards

- **Postdoctoral Award:** Six months postdoctoral (Endeavour Research) Fellowship, University of Adelaide, South Australia, 2015. This fellowship is awarded to me by the Department of Education, Commonwealth of Australia.
- **IRSIP Award:** Six months fellowship titled: “International Research Support Initiative Program (IRSIP)” awarded by Higher Education Commission (HEC), Pakistan, in the University of Adelaide, Australia, 2009.
- **Talent Training Award:** Three months training titled: “Talent/Training program for technical staff and researchers” in the National Centre of Excellence in Geology, University of Peshawar, Pakistan, 2009.

Research Interest

I am basically Igneous Petrologist and am working on the petrogenesis of igneous rocks. My research is focusing mainly tectonic setting of ophiolites in Pakistan, magmatic evolution of Chagai-Ras Koh island arc, petrogenesis of hotspot-related intrusive and extrusive rocks exposed particularly in Baluchistan, Pakistan.

Courses Teaching

- Applied Mineralogy
- Research Methodology and Technical Writing
- Igneous and Metamorphic Petrology
- Geochemistry

Work Experience

- **Professor**, Centre of Excellence in Mineralogy, University of Baluchistan, Quetta, Pakistan, from January 2019 to present.
- **Associate Professor**, Centre of Excellence in Mineralogy, University of Baluchistan, Quetta, Pakistan, from August 2015 to December 2018.
- **Assistant Professor**, Centre of Excellence in Mineralogy, University of Baluchistan, Quetta, Pakistan, from July 2007 to July 2015.
- **Lecturer**, Department of Geology, University of Baluchistan, Quetta, Pakistan, from May 2003 to June 2007.

MS/M.Phil. Thesis Supervised

- Petrology of the Naweoba Block, Zhob Ophiolite, Baluchistan, Pakistan (Co-supervisor).
- Gemstones and mineral specimens associated with the Muslim Bagh Ophiolite Complex, Pakistan (Co-supervisor).
- Mode of occurrence and Economic Potential of Magnesite deposits, Nisai area, Muslim Bagh ophiolite, northwestern Pakistan (Co-supervisor).
- Chromite rich and chromite poor peridotite, Muslim Bagh Ophiolite, Pakistan, (Co-supervisor).
- Petrology of the igneous rocks of Bagh Complex, Baluchistan, Pakistan (Co-supervisor).
- Petrology and Geochemistry of Igneous Intrusions in Triassic–Cretaceous Successions of the western Sulaiman Fold-Thrust belt, northern Balochistan, Pakistan (2016-2017) (Supervisor).
- Petrology of Gabbros from the Khanozai Ophiolite, Balochistan, Pakistan (2016-2017) (Supervisor).
- Petrology of the Granitic Rocks from the Bela Ophiolite, Southern Pakistan (2016-2017) (Supervisor).
- Gemology of the Gems and Mineral Specimens from Northern Balochistan, Pakistan (2016-2017) (Supervisor).
- Petrology of the mantle rocks from the Khanozai Ophiolite, Balochistan, Pakistan (2017-2018) (Supervisor).
- Petrology of volcanic rocks beneath the Khanozai Ophiolite, Balochistan, Pakistan (2017-2018) (Supervisor).

MSc. /MS Thesis Co-Supervised with my collaborator in UK

- Petrogenesis of Plagiogranitic Dykes and Irregular Inclusions from the Sheeted Dyke Complex of the Muslim Bagh Ophiolite, Northwestern Pakistan, by: Owain Mostyn Lavis in the School of Earth and Ocean Sciences, Cardiff University, Wales, UK, (2015).
- Geochemistry and Petrogenesis of Igneous Intrusions within the Eocene Nisai Formation of the Muslim Bagh Region, Pakistan, by: Daniel Cox in the School of Earth and Ocean Sciences, Cardiff University, Wales, UK, (2014).

HEC National Research Program for Universities (NRPU) Funded Project.

- Geology, Petro-chemistry and Tectonic Setting of Zhob Valley Ophiolites, northwestern Pakistan of **Rs. 3,287,562/-** for the years 2016-2018.

Ph.D. and MS/M.Phil. Theses currently under my supervision

PhD

- Genesis of Economic Minerals from the Zhob Valley Ophiolites, Balochistan, Pakistan (2017-19).
- Petrology, Geochemistry and Tectonic Setting of Zhob Ophiolites, Northwestern Pakistan (2018-20)

MS/M.Phil

- Geology and Petrology of the Rocks of Omzha Block, Zhob Ophiolites, northern Balochistan, Pakistan (2018-20).
- Geology of Ali Khanzai Massif of Zhob Ophiolites, Balochistan, Pakistan (2018-20).
- Petrology of Gabbros from Sorap Massif, Ras-Koh Ophiolites, South-west of Dalbandin, District Chagai, Balochistan, Pakistan (2018-20).
- Petrology of Chromitites from the Khanozai Ophiolite, Northern Balochistan, Pakistan (2018-20)
- Petrology of the Crustal Plutonic Rocks, Naweoba Block Zhob Ophiolite, Balochistan, Pakistan (2019-21).
- Geology of Gowal Melange, District Pishin, Balochistan, Pakistan (2019-21).

Number of MS/M.Phil. & Ph.D. Theses Evaluated

1. **MS/M.Phil. Thesis** = 6
2. **PhD. Thesis** = 1

Publications in the ISI-indexed journals having Impact Factor

1. Muhammad, D., Durrani, R. A. M., Kassi, A. M., **Kakar, M. I.**, 2019. Petrology and Geochemistry of Dolerite and Lamprophyre Sills in Mesozoic Successions of Khanozai–Muslim Bagh Area, Northwestern Pakistan. *Arabian Journal of Geosciences* (**accepted**). (2017 impact Factor = 0.86).
2. Cox, D., Kerr, A. C., Hastie, A. R., **Kakar, M.I.**, 2018. Petrogenesis of plagiogranites in the Muslim Bagh Ophiolite, Pakistan: Implications for the generation of Archaean continental crust. *Geological Magazine*. **Doi: 10.1017/S0016756818000250**, (2017 impact Factor = 2.34).
3. Siddiqui, R. H., Jan, M. Q., Khan, M. A., **Kakar M.I.**, Foden, J.D., 2017. Petrogenesis of the Late Cretaceous tholeiitic volcanism and oceanic arc affinity of the Chagai Arc, Western Pakistan. *Acta Geologica Sinica (English Edition)*, 91 (4), 1248–1263. (2017 impact Factor = 2.5).
4. Siddiqui, R. H., Jan, M.Q., **Kakar, M.I.**, Kakar, E., M., Haider, N., 2016. Petrology and geochemistry of the Juzzak Sill, western Chagai arc (Pakistan): implications for petrogenesis and emplacement. *Arabian Journal of Geosciences* 9(13), 626. (2017 impact Factor = 0.86).

5. Siddiqui, R. H., Jan, M. Q., **Kakar, M. I.**, Kerr, A. C., Khan, A. S., Kakar, E., 2016. Petrogenesis of Middle Triassic Volcaniclastic rocks from Baluchistan, Pakistan: Implications for the break-up of Gondwanaland, *Journal of Earth Science*. DOI: 10.1007/s12583-016-0911-x. (2017 impact Factor = 1.5).
6. Kerr, A. C., Lavis, O, **Kakar, M.I.**, McDonald, I. 2016. Petrogenesis and tectonomagmatic significance of Eocene mafic intrusions from the Neo-Tethyan suture zone in the Muslim Bagh-Khanozai region, Pakistan. *Journal of the Geological Society*, 173, 518–530. (2017 impact Factor = 2.68).
7. Kasi, A.K., Kassi, A.M., Friis, Henrik, Umar, M., Mohibullah, M., **Kakar, M. I.**, 2016. Detrital Mode and Whole-Rock Geochemistry of the Neogene Fluvial Succession, Pishin Belt, Pakistan: Implications on Provenance and Source Area Weathering in peripheral foreland basins. *Arabian Journal of Geosciences* 9 (401) (2017 impact Factor = 0.86).
8. Siddiqui, R. H., Jan, M. Q., **Kakar M.I.**, Kakar, E., Chaudhary, A.H., Baig, S.A., 2016. Late Cretaceous Mantle Plume Activity in Ceno-Tethys: Evidences from the Hamrani volcanic rocks, Evidenced by the Hamrani volcanic rocks from north-western Pakistan. *Arabian Journal of Geosciences*, 1(9), 1-11. (2017 impact Factor = 0.86).
9. Siddiqui, R. H., Khan, M. A., Jan, M. Q., **Kakar, M. I.**, Kerr, A. C., 2015. Geochemistry and Petrogenesis of Oligocene Volcaniclastic Rocks from the Chagai Arc: Implications for the Emplacement of Porphyry Copper Deposits, *Arabian Journal of Geosciences* 8, (10), 8655-8667 (2017 impact Factor = 0.86).
10. **Kakar, M.I.**, Mahmood, K., Arif, M., Khan, M., Kerr, A.C., Mohibullah, M., Kasi, A. K., 2015. Petrology and geochemistry of mafic dykes from the Muslim Bagh Ophiolite (Pakistan): implications for petrogenesis and emplacement, *Turkish Journal of Earth Sciences*, 24: 165-178, (2017 impact Factor = 1.13).
11. **Kakar, M.I.**, Mahmood, K., and Khan, Plavsa, D, 2015. Petrology and Geochemistry of Amphibolites and Greenschists associated with the Muslim Bagh Ophiolite (NW Pakistan): Implications for protolith and Ophiolite emplacement, *Arabian Journal of Geosciences*, 8 (8), 6105-6120, (2017 impact Factor = 0.86).
12. **Kakar, M. I.**, Kerr, A. C., Collins, A. S., Mahmood, K., Khan, M., McDonald, I., 2014. Supra-subduction zone tectonic setting of the Muslim Bagh Ophiolite, northwestern Pakistan: insights from geochemistry and petrology. *Lithos*, 202-203: 190–206, (2017 impact Factor = 3.857).
13. **Kakar, M.I.**, Collins, A.S., Mahmood, K., Foden, J.D. and Khan, M. 2012. U-Pb Zircon Crystallization Age of the Muslim Bagh Ophiolite: Enigmatic Remains of an Extensive Pre-Himalayan Arc, *Geology*, 40 (12), 1099-1102, (2017 impact Factor = 5).

Publications in the HEC-recognized journals

1. Khan, M., Khan, M. J., Mahmood, K., **Kakar, M.I.**, 2018. Geology and Petrology of Crustal Section of Bela Ophiolite, Balochistan, Pakistan, *Bahria University Research Journal of Earth Sciences*, 3 (1): 1-5. (HEC recognized Z-category journal).
2. Ahmed, J., **Kakar, M. I.**, Khan, M. A., Ghaffar, A., & Naeem, A. 2017. The Classification and Distribution of Gemstones from Northern Balochistan, Pakistan. *Lasbela University Journal of Science and Technology*, 6, 290-298. (HEC recognized Z-category journal).
3. **Kakar, M.I.**, Khan, M., Mahmood, K., Kerr, A. C., 2014. Facies and distribution of metamorphic rocks beneath the Muslim Bagh Ophiolite, (NW Pakistan): tectonic implications. *Journal of Himalayan Earth Sciences*, 47 (2): 115-124, (HEC recognized X-category journal).
4. Kasi, A. K., Kassi, A. M, Friis, H., **Kakar, M. I.**, Manan, R. A., 2014. Clay minerals assemblage in the Neogene Fluvial succession of the Pishin belt, Pakistan: implications for provenance, *Journal of Himalayan Earth Sciences*, 47 (2): 63-73, (HEC recognized X-category journal).
5. **Kakar, M.I.**, Mahmood, K., Kerr, A. C., and Khan, M., 2013. Petrology of the Mantle Rocks from the Muslim Bagh Ophiolite, Baluchistan, Pakistan, *Journal of Himalayan Earth Sciences*, 46(2), 101-112, (HEC recognized X-category journal).
6. **Kakar, M.I.**, Mahmood, K., Khan, M., Kasi, A. K. and Manan, R. A., 2013. Petrology and geochemistry of gabbros from the Muslim Bagh ophiolite: implications for their Petrogenesis and

- tectonic setting, *Journal of Himalayan Earth Sciences* 46(1), 19-30, (HEC recognized X-category journal).
7. Kasi, A. K., Kassi, A. M, Umar, M. Manan, R. A., and **Kakar, M. I.**, 2012. Revised Lithostratigraphy and Tectonic Zones of the Pishin Belt, northwestern Pakistan. *Journal of Himalayan Earth Sciences*, 45 (1), 53-65, (HEC recognized X-category journal).
 8. **Kakar, M. I.**, Mahmood, K., Kerr, A. C., Collins, A. S. Khan, M. and Kasi, A. K., 2012. Geochemistry and Petrogenesis of volcanic rocks from the Bagh complex, northern Baluchistan, Pakistan, *Journal of Himalayan Earth Sciences* 45, (1), 17-29, (HEC recognized X-category journal).

Publications in online journals

1. Qazi, Q.A., **Kakar, M.I.**, Khan, M., Siddiqui, R.H., 2018. Petrology and major element geochemistry of granitic rocks from Bela Ophiolite; economic implications. *International Research Journal of Earth Sciences*, 6(5), 1-8.
2. Khan, M., Khan M.J., **Kakar, M.I.**, Mahmood, K., 2018. Geology and Tectonic Setting of Nal Ophiolite, District Khuzdar, Balochistan, Pakistan. *American Journal of Earth and Environmental Sciences*, 1(2): 115-123.

Conference abstracts

1. **Kakar, M. I.**, Khan, M. A., and Siddiqui, R. H., 2017. Geology and Petro-Chemistry of the Muslim Bagh Ophiolite Complex, NW Pakistan: Implications for the Exploration of Mineral Deposits Found Associated with Complex. *International Journal of Economic and Environmental Geology* (HEC recognized Y-category journal), abstract vol.
2. **Kakar, M. I.**, Kerr, A. C., Lavais, O., McDonald, I., 2016. Geochemistry and petrogenesis of igneous intrusions within the Eocene Nisai Formation of the Muslim Bagh-Khanozai Region, NW Pakistan. Presented in the International Conference on: Earth Sciences Pakistan 15-17 July, 2016 and published in the *Journal of Himalayan Earth Sciences* (HEC recognized X-category journal), **abstract** vol., p. 69.
3. **Kakar, M.I.**, Mahmood, K., Khan, M., Arif, M., and Plavska, D., 2014. Petrology and geochemistry of the dykes from the Muslim Bagh Ophiolite, Baluchistan, Pakistan. Presented in the International Conference on: Earth Sciences Pakistan 29-31 August, 2014, and published in the *Journal of Himalayan Earth Sciences* (HEC recognized X-category journal), **abstract** p. 40.
4. Ayoub, M., Mahmood, K., **Kakar, M.I.**, Petrology of the Naweoba Block of Zhob Ophiolite, Northern Baluchistan, Pakistan, *Journal of Himalayan Earth Sciences* (HEC recognized X-category journal), **abstract** vol., p. 49.
5. Naeem, A., Mahmood, K., **Kakar, M.I.**, Sohail, K., A study of the Gemstones from the Muslim Bagh Ophiolite Complex, Baluchistan, Pakistan, *Journal of Himalayan Earth Sciences* (HEC recognized X-category journal), **abstract** vol., p. 63.
6. **Kakar, M.I.**, Mahmood, K., and Khan, M., 2012. Petrology of the Mantle Rocks from the Muslim Bagh Ophiolite, Baluchistan, Pakistan, *Journal of Himalayan Earth Sciences* (HEC recognized X-category journal), **abstract** vol. 45 (2), 69.