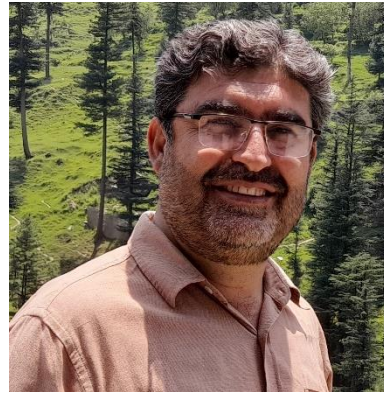


CURRICULUM VITAE

Name: Muhammad Ishaq Kakar
Designation: Professor and Acting Director
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Higher Qualification

- ❖ **Ph.D.:** University of Baluchistan, Quetta, Pakistan (2012).
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/Scientific staff and researchers” in the National Centre of Excellence in Geology, University of Peshawar, Pakistan, 2009.

Research Interest

I am an 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 Igneous rocks exposed particularly in Baluchistan, Pakistan. I have also worked on metamorphic sole rocks associated with ophiolites and have also switched to work on the mineralization associated with both ophiolite belts and island arcs.

Courses Teaching

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

Work Experience

- **Acting Director,** Centre of Excellence in Mineralogy, University of Baluchistan, Quetta, Pakistan since February 10, 2019 to present.
- **Professor,** Centre of Excellence in Mineralogy, University of Baluchistan, Quetta, Pakistan, since January 22, 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 Produced

- 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) (Principal Supervisor).
- Petrology of Gabbros from the Khanozai Ophiolite, Balochistan, Pakistan (2016–2017) (Principal Supervisor).
 Petrology of the Granitic Rocks from the Bela Ophiolite, Southern Pakistan (2016–2017) (Principal Supervisor).
- Gemology of the Gems and Mineral Specimens from Northern Balochistan, Pakistan (2016–2017) (Principal Supervisor).

- Petrology of the mantle rocks from the Khanozai Ophiolite, Balochistan, Pakistan (2017-2018) (Principal Supervisor).
- Petrology of volcanic rocks beneath the Khanozai Ophiolite, Balochistan, Pakistan (2017-2018) (Principal Supervisor).
- Petrology of Chromitites from the Khanozai Ophiolite, Northern Balochistan, Pakistan (Principal Supervisor).
- Geology of Gwal Mélange beneath the Khanozai Ophiolite, Balochistan, Pakistan (Principal Supervisor).
- Geology and Petrology of Omzha Block of Zhob Ophiolites, Northern Balochistan, Pakistan (Principal Supervisor).
- Petrology of the Crustal Plutonic Rocks of Naweoba Block, Zhob Ophiolite, Northern Balochistan, Pakistan (Principal Supervisor).
- A Study of Gemstones Associated with Bela Ophiolite Belt, Southern Baluchistan, Pakistan (Principal Supervisor).
- Petrology of Gabbros from Sorap Massif, Ras-Koh Ophiolites, South-west of Dalbandin, District Chagai, Balochistan, Pakistan (Principal Supervisor).

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

Ph.D. Thesis Produced

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

Funding Won and Applied

- Geology, Petro-chemistry, and Tectonic Setting of Zhob Valley Ophiolites, northwestern Pakistan of **Rs. 3,287,562/-** for the years 2016-2019. HEC National Research Program for Universities (NRPU) Funded Project.
- Timing of India-Eurasia Collision: Age, Geochemical and Paleomagnetic Study on the Bela–Zhob Valley–Waziristan Suture Zone, Central Pakistan. A collaborative project with the Institute of Geology and Geophysics, Chinese Academy of Sciences (IGG-CAS), Beijing, China. (Submitted to China Natural Science Foundation Under Review).
- Economic and Environmental Sustainability of Mineral Resources of Khyber Pakhtunkhwa and Balochistan: Implications for Industrial and Institutional Development. This project is lead by NCEG-UoP, CEM is a collaborator and participant from Balochistan. Higher Education Development in Pakistan (HEDP) Project; The Center of Excellence (CoE) Grants.
- Metallogeny and Mineralization Potential of the Chagai Hills Granitoids, Western Pakistan. Higher Education Commission, Pakistan CPEC – COLLABORATIVE RESEARCH GRANT. PI Dr. Inayat Ullah and Co-PI Dr. Muhammad Ishaq Kakar

M.Phil. Thesis currently under my supervision

- Petrology of Intrusive Igneous Rocks in Mesozoic Sedimentary Rocks of Qila Saifullah–Zhob Area, Balochistan, Pakistan (2019-21).
- Geology of the Chigeen Diq Iron Ore Deposit, District Chagai, Balochistan (2019-21).
- Geological and Petrological Characterization of the Volcanic Hosted Metallic Mineralization at Landi-76 Area, Eastern Raskoh Arc, District Chagai, Balochistan (2019-21).
- Petrography and Mineralization of Magmatic Iron Ore Deposit in Pachin-Koh, Northwest of Nokundi, District Chagai, Balochistan (2019-21).
- Petrology of Chromitites and their host Ultramafic Rocks from Baran Lak and Khazini areas, Bela Ophiolite, Balochistan (2019-21).
- Petrology of Ultramafic Cumulates and Origin of Magmatic Iron in the Crustal Section of Khanozai Ophiolite, Northern Balochistan (2019-21).

Publications in the HJRS W-Category journals

1. Ullah, I., Xue, C., **Kakar, M. I.**, Xie, Z., Wang, W., Ghaffar, A., & Ullah, N. 2021. Petrological and geochemical characterization of metamorphic sole rocks beneath the RasKoh ophiolite, western Pakistan: Implication for a Late Cretaceous supra-subduction zone-type forearc. Geological Journal. Doi.org/10.1002/gj.4264.

2. Khan, M. A., **Kakar, M. I.**, Ulrich, T., Ali, L., Kerr, A. C., Mahmood, K., & Siddiqui, R. H. 2020. Genesis of Manganese Deposits in the Ali Khanzai Block of the Zhob Ophiolite, Pakistan: Inferences from Geochemistry and Mineralogy. *Journal of Earth Science*, 31(5), 884-895.
3. Khan, M. A., Ulrich, T., **Kakar, M.I.**, Akmaz, R.M., Ali, L., 2020. Genesis and geotectonic setting of podiform chromitites from Zhob Valley Ophiolite, Pakistan: Inferences from chromite composition, *Episodes*, 43(4), 1017-1039.
4. 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 Khanzai–Muslim Bagh Area, Northwestern Pakistan. *Arabian Journal of Geosciences*, 12(8), 1-12.
5. 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*, 156(5), 874-888.
6. 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.
7. 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.
8. 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*, 28 (2): 218-222.
9. 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-Khanzai region, Pakistan. *Journal of the Geological Society*, 173, 518–530.
10. 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). DOI [10.1007/s12517-016-2415-9](https://doi.org/10.1007/s12517-016-2415-9)
11. 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.
12. 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.
13. **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.
14. **Kakar, M.I.**, Mahmood, K., and Khan, Plavsá, 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.
15. **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.
16. **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.

Publications in the HJRS X and Y-Category journals

17. Naeem, A., **Kakar, M. I.**, Siddiqui, R. H., Kerr, A. C., Jan, M. Q., & Khan, M. A. 2022. Geology and petrogenesis of gabbro from the Zhob Ophiolite, Balochistan, Pakistan. *Arabian Journal of Geosciences*, 15(13), 1-20.
18. Naeem, A., Kerr, A. C., **Kakar, M. I.**, Siddiqui, R. H., Khan, M. A., & Ahmed, N. 2021. Petrology and geochemistry of volcanic and volcanoclastic rocks from Zhob ophiolite, North-Western Pakistan. *Arabian Journal of Geosciences*, 14(2), 1-19.
19. Ali, N., **Kakar, M.I.**, Khattak N.U., Agheem, M.H., Haider, N., 2019. Petrology and Major Element Geochemistry of Volcanic Rocks beneath the Khanzai Ophiolite, Balochistan, Pakistan, Pakistan. *Bahria University Research Journal of Earth Sciences*, 4(1), 40-45.
20. Ul Haq, E., **Kakar, M.I.**, Khan, M. A., Ali, L., Khan, M., 2019. Petrology and Major Element Geochemistry of Mantle Rocks from Khanzai Ophiolite, Northern Balochistan, Pakistan. *Bahria University Research Journal of Earth Sciences*, 4(1), 26-32.

21. 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.
22. 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.
23. **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.
24. Kasi, A.K., Kassi, A. M., Friis, H., **Kakar, M. I.**, Manan, R.A., 2014. Clay minerals assemblage in the Neogene Fluvial succession of Pishin belt, Pakistan: implications for provenance, Journal of Himalayan Earth Sciences 47(2): 63-73.
25. **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.
26. **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.
27. Kasi, A. K., Kassi, A. M., Umar, M. Manan, R. A., and **Kakar, M. I.**, 2012. Revised Litho-stratigraphy and Tectonic Zones of the Pishin Belt, northwestern Pakistan. Journal of Himalayan Earth Sciences, 45 (1), 53-65.
28. **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.

Publications in Online Journals

1. Uddin, N., **Kakar, M. I.**, Farooq, U., Panezai, M., Ghani, M., & Ahmed, N., 2021. Petrology of the Crustal Plutonic Rocks of Naweoba Block, Zhob Ophiolite, Balochistan, Pakistan. Earth Sciences Pakistan, 5(1): 26-32.
2. Ahmed, A., **Kakar, M. I.**, Naeem, A., Ahmed, N., Khan, M., & Panezai, M. 2020. Geology and Petrology of Omzha Block, Zhob Ophiolite, northern Balochistan, Pakistan. Pakistan Journal of Geology, 4(2), 72-80.
3. Popal, A., **Kakar, M. I.**, & Khan, M. 2019. Geology and petrography of gabbroic rocks from Khanozai Ophiolite, Northwestern Pakistan. International Research Journal of Earth Sciences, 7(3): 10-22
4. 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.
5. 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. Naeem, A., **Kakar, M.I.**, Siddiqui, R. U., Kerr, A. C., Khan, M. A., 2022 Geology of Zhob Ophiolite, Balochistan, Pakistan, presented in ESP Conference, 2022. **Abstract** vol., Page 86.
2. Ullah, I., Xueb, C., Xieb, Z., **Kakar, M.I.**, Ghaffar, A., 2022. The emplacement history and Tectonic setting of Ras Koh metamorphic sole rocks in a forearc setting: Evidence from Geology, Petrology, and Geochemistry presented in ESP Conference, 2022. **Abstract** vol., Page 120.
3. Khan, M. A., Ulrich, T., **Kakar, M. I.**, Akmaz, R.M., Siddiqui, R. U., Ali, L., 2022. Compositional variations of chromite in chromitites from the Zhob Valley Ophiolites: Implications for chromitite origin, presented in ESP Conference, 2022. **Abstract** vol., Page 62.
4. **Kakar, M.I.**, Muhammad, D. Durrani, R.A.M., Kassi, M.K., Kerr, A.C., 2018. Petrology and geochemistry of dolerite and lamprophyre sills in Mesozoic successions of western Sulaiman Fold Belt, Pakistan, **abstract** vol., Page 69.
5. **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, **abstract** vol.
6. **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, **abstract** vol., p. 69.
7. **Kakar, M.I.**, Mahmood, K., Khan, M., Arif, M., and Plavsa, 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, **abstract** p. 40.
8. Ayoub, M., Mahmood, K., **Kakar, M.I.**, 2014, Petrology of the Naweoba Block of Zhob Ophiolite, Northern Baluchistan, Pakistan, Journal of Himalayan Earth Sciences, **abstract** vol., p. 49.
9. Naeem, A., Mahmood, K., **Kakar, M.I.**, Sohail, K., 2014, A study of the Gemstones from the Muslim Bagh Ophiolite Complex, Baluchistan, Pakistan, Journal of Himalayan Earth Sciences, **abstract** vol., p. 63.
10. **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, **abstract** vol. 45 (2), p.69.