C.V.

Name : Dr. TALAT AHMAD,
FNA; FASc; FNASc, J. C. Bose National Fellow

Father's Name : Late Alhaj Moinuddin Ahmad

Date of birth : 23.12.1955

Present designation : Vice Chancellor,
University of Kashmir,
Hazratbal,
Srinagar – 190 006, J&K

Academic Qualifications

B.Sc. (Hons) Geology	AMU, Aligarh	Ist Div.	1975
M.Sc. Geology	AMU, Aligarh	Ist Div.	1977
M.Phil. Ore Petrology-Geochemistry	JNU, New Delhi		1980
Ph.D. Igneous Petrology-Geochemistry	JNU, New Delhi		1985
Post Doctoral Fellow	University of Leicester (U.K.)		1988-89
Post Doctoral Fellow	University of Cambridge (U.K.)		1997-98
Post Doctoral Fellow	Nagoya University (Japan)		1999-2000

Expericnce

1. Geological Survey of India as Geologist (Jr.) from 28.2.80 to 2.6.81.
2. Wadia Institute of Himalayan Geology, Dehra Dun as Scientist-B from 16.7.84 to 30.9.89.
3. Post Doctoral Fellow with Prof. John Tarney at the Department of Geology, University of Leicester, U.K. for one year and six months (April 1988-Oct. 1989) under Government of India, Ministry of Human Resource Development Fellowship.
4. Wadia Institute of Himalayan Geology, Dehra Dun as Scientist-C from 1.10.89 to 30.9.94.
5. Wadia Institute of Himalayan Geology, Dehra Dun as Scientist-D from 1.10.94 to 30.9.99.
6. Post Doctoral Fellow with Prof. M.J. Bickle at the Department of Earth Sciences, University of Cambridge, for a period of six months (October'97-March'98) under NERC Fellowship.
7. Post Doctoral Fellow with Prof. T. Tanaka at the Department of Earth & Planetary Sciences, Nagoya University, Japan for ten months (October'99 to July'2000) under JSPS Fellowship.
8. Wadia Institute of Himalayan Geology, Dehra Dun. as Scientist E from 1.10.99 to 30.10.03

9. Professor at Department of Geology, University of Delhi, Delhi from 31st October'03 to 31.05.2011
10. Vice Chancellor, University of Kashmir, Hazratbal, Srinagar – 190 006, J&K from 1st June, 2011 till date

Academic Supervision

Supervised the following M.Phil/Ph.D. work:

M.Phil Dissertation

"Geochemistry of Mafic-ultramafic rocks around Gogunda, District Udaipur, Rajasthan" Co-Supervisor - Dr. M.Raza, AMU, Aligarh (Degree awarded to the student in the year 1991).

Ph.D. Thesis

1. Ph. D thesis entitled "Geochemistry and tectonic significance of Early Proterozoic mafic and ultramafic rocks of Jharol belt of Aravalli orogen, northwestern Rajasthan, India" was submitted by Mr. Hamatteh-Abu, Z.S.H., at the Department of Geology, A. M. U. Aligarh. I acted as Co-Supervisor with Prof. M. Raza (Degree awarded in the year 1995).

2. Ph.D thesis entitled "Isotopic mapping of major Himalayan structures" was submitted by Mr. Andy Richards at the Department of Earth Sciences, The Open University, U.K. on 15th September'04 for the award of Ph. D degree. I acted as the External Supervisor for this thesis work. (Degree awarded on 4th February, 2005)

3. Ph.D thesis entitled "Petrological and geochemical studies of gneisses, granitoids and mafic dyke swarms in parts of Bastar craton" was submitted by Mr. Hussain, M.F. at the Department of Geology, A. M.U. Aligarh on 27th January'04 for the award of Ph.D degree. I acted as Co-Supervisor with Dr. M.E.A. Mondal, A.M.U. Aligarh. (Degree awarded in the year 2004)

4. Ph. D thesis entitled "Geochemistry of Amgaon Gneissic Complex, Central India" was submitted by Mr. Nishchal Wanjari at the Department of Geology, University of Delhi on 10th December, 2007. Degree awarded on 15th September, 2008.

5. Ph. D thesis entitled "Thermal Evolution of the Mid-Crust from the Himalayan Orogen" was submitted at the Department of Earth Sciences, The Open University, U.K. on 17th July'08 for the award of Ph. D degree. I acted as the External Supervisor for this thesis work. (Degree awarded on 7th October, 2008)

6. Ph. D thesis entitled "Geodynamic evolution of the Shyok Suture Zone, NW Himalaya" was submitted by Ms. Sivaprabha, S. at the Department of Earth Sciences, Indian Institute of Technology Roorkee on 22nd December, 2008. Degree awarded on 3rd June, 2009.

7. Ph. D thesis entitled "Petrologic and geochemical studies of igneous and metamorphic rocks from the Tso Morari, SE Ladakh" was submitted by Ms. Preeti Singh at the Department of Geology, University of Delhi in December, 2008. Degree awarded October'09.

8. Ph. D thesis entitled "Geochemistry and petrogenesis of Bayana mafic magmatic rocks, North Delhi Fold Belt, Rajasthan" was submitted by Y. Rajesh Singh at the Department of Geology, University of Delhi in December, 2010. Degree awarded October"2010.

9. Ph. D thesis entitled "Geochemistry, Petrogenesis and U-Pb zircon geochronology of basement granitoids and gneisses of Central Indian Tectonic Zone (CITZ), Central Indian Shield" was submitted by Mukesh Kumar Mishra at the Department of Geology, University of Delhi on 31st May, 2011.

Presently supervising six students for their Ph. D work at the University of Delhi and two students at the Research School of Earth Sciences, Australian National University, Canberra, Australia. These students are working on the petrological-geochemical and tectonic aspects of Precambrian granitoids of the Central and western Indian shield and the Lesser Himalaya and Higher Himalayan Crystallines, NW Himalaya. Four M. Sc students are doing their dissertations on the Bundelkhand granitoids, Central Indian Shield.

Honours

(I) Honorary Research Associate of the Department of Geology, University of Leicester, U.K. (1988-89).
(II) Member of the Editorial Advisory Board of the Indian Journal of Geochemistry.
(III) Associate Member, Wadia Institute of Himalayan Geology Society.
(IV) Member, Expert Panel for the Science & Engineering Research Council „Deep Continental Studies Programme" of the Department of Science & Technology, New Delhi.
(V) Member, Expert Panel for the Science & Engineering Research Council „HIMPROBE EAST" of the Department of Science & Technology, New Delhi.
(VI) Member, Board of Research Studies for the Faculty of Sciences, Department of Geology & Geophysics, The University of Kashmir, Srinagar, J&K.
(VII) Member, Management Advisory Committee (MAC) for the Science & Engineering Research Council (SERC) „Utilization of Scientific Expertise of Retired Scientist (USERS) Programme of the Department of Science & Technology, New Delhi.
(VIII) Member, Board of Studies, Department of Geology, University of Rajasthan, Jaipur
(IX) Regional Coordinator, International Geological Correlation Programme (IGCP) Project 516 on the "Geological anatomy of East and South East Asia"
(X) Member, Editorial Board for Indian Journal of Geology
(XI) Member Working Group for Geology for the National Science Digital Library (NSDL) Under the National Institute of Science Communication and Information Resources, CSIR, New Delhi
(XII) Member, Editorial Board for Earth, Environmental and Planetary Sciences
(XIII) Member, Expert Group for „Electron Probe Micro-Analyzer (EPMA) National Facility at IIT, Kharagpur" under the Science & Engineering Research Council, Department of Science & Technology, New Delhi.
(XIV) Member Editorial Board for Journal of Virtual Explorer an electronic journal from Monash University, Australia. ISSN Number: 1441-8126 (Printed Journal); 1441-8142 (Online Journal) and 1441-8134 (CD-ROM Jpurnal)
(XV) Member Editorial Board of the Journal of the Mineralogical Society of India
(XVI) Member Editorial Board of the Gondwana Geological Magazine
(XVII) Member Editorial Board of the Journal of the Geological Society of India

(XVIII) Member Editorial Board Of the Journal of Earth System Science
(XIX) Member, Expert Group for FIST North East, DST, New Delhi
(XX) Member, National Assessment & Accreditation Council (NAAC) UGC
(XXI) Member, Governing Body, National Centre of Experimental Mineralogy & Petrology, University of Allahabad
(XXII) Member Advisory Committee DRS-1, Department of Geology, AMU Aligarh
(XXIII) Member Expert Committee for Post Doctoral Fellowship (SC/ST) UGC, New Delhi
(XXIV) Member Expert Committee Earth & Environmental Sciences, CSIR, New Delhi
(XXV) Member Award Making Authority-National Geoscience Award, Ministry of Mines, Govt. of India

Awards

(I) Received the prestigious **National Mineral Award, 1994** from the Government of India.
(II) **Fellow of the Indian National Science Academy, New Delhi**
(III) **Fellow of the Indian Academy of Sciences**, **Bangalore**
(IV) **Fellow of the National Academy of Sciences, India, Allahabad**
(V) **J. C. Bose National Fellowship, DST, New Delhi**
(VI) Life Member Mineralogical Society of India
(VI) Research paper entitled "Geochemistry and Petrogenesis of Mandi-Darla Volcanics, Northwestern Himalayas", Precambrian Res. 37 : 231-256 (1987) was awarded Best paper of the year 1987 at WIHG, Dehra Dun.
(VII) Awarded National Scholarship for Study Abroad by the Ministry of Human Resource Development, Govt. of India to carry out Post Doctoral Research at University of Leicester, U.K. during the period April 1988 to Oct. 1989.
(VIII) Awarded the JSPS Invitation Fellowship of the Japanese Government for the year 1999-2000 to work in collaboration with Prof. Tsuyoshi Tanaka, at the Department of Earth and Planetary Sciences, Nagoya University, Japan.

Sponsored Ongoing Projects:

a. Geochemical, isotopic and geochronological characterization of granitoids from the Central Indian Tectonic Zones (CITZ) and Central Indian Shear Zones (CISZ) -Constraints on Precambrian crustal evolution. Funding Agency: Indo-Russian: ILTP Project, DST , (T. Ahmad: PI)
b. Proterozoic mafic magmatism in the central Indian tectonic zone (CITZ): elemental and isotopic constraints on crustal evolution and geodynamics. Funding agency: DST (T. Ahmad: P.I.)
c. Constraints on crustal evolution and ore mineralization in the Aravalli-Bundelkhand Proto-Continent, Northern Indian Shield, and the Eastern Baltic Shield, Russia, DST-RFBR (T. Ahmad, Co-PI)

Edited Journal Volumes:

Journal of the Geological India, Special Volume on **Precambrian Mafic Magmatism in the Indian Shield**, Part – I, Jour. Geol Soc. India, Vol. 72, No. 1, 140p (2008)

Journal of the Geological India, Special Volume on **Precambrian Mafic Magmatism in the Indian Shield**, Part – II, Jour. Geol Soc. India, Vol. 73, No. 1, 152p (2009)

Journal of Virtual Explorer, Special Volume on **Geological Anatomy of East and South Asia**, Edited By: Talat Ahmad, Francis Hirsch, Punya Charusiri , Volume 32 (2009); An electronic journal from Monash University, Australia. ISSN Number: 1441-8126

Gondwana Research, Special Volume on **The South and East Facades of Sundaland**, Edited by Francis Hirsch, Punya Charusiri, Talat Ahmad (On line 12th June, 2010)

Research Publications

Ahmad, T. and Bhat, M.I., 1987. Geochemistry and petrogenesis of the Mandi-Darla volcanics Northwestern Himalaya. Precambrian Res. 27 : 231-256.

Bhat, M.I. and Ahmad, T., 1987. Geochemistry and Petrogenesis of the Bhowali-Bhimatal Volcanics, Kumaun Lesser Himalayas. Geosci. Jour. 8, 51-68.

Ahmad, T. and Rajamani, V., 1988. Geochemistry and petrogenesis of mafic inclusions within the Banded Gneissic Complex, near Nathdwara : implications to BGC-Aravalli relationship. Geol. Soc. India, Mem. 7, Precambrian of Aravalli Mountain, Rajasthan, India, pp. 327-340.

Bhat, M.I. and Ahmad, T., 1990. Petrogenesis and the mantle source characteristics of the Abor Volcanic Rocks, Eastern Himalayas. Jour. Geol. Soc. India, 36, 227-246.

Ahmad, T., 1990. Variable extents and depths of melting of mantle diapir(s): evidence from early Proterozoic komatiitic (picritic) magmas and its influence on associated tholeiites and crustal evolution in N.W. India. In : Proceedings of the Symposium on Diapirism with special reference to Iran, Vol. 2, pp. 15-35.

Ahmad, T. and Rajamani, V., 1991. Geochemistry and petrogenesis of the basal Aravalli Volcanics near Nathdwara, Rajasthan, India. Precambrian Res. 49 : 185-204.

Ahmad, T. and Tarney, J., 1991. Geochemistry and petrogenesis of Garhwal Volcanics : implications for evolution of the north Indian lithosphere. Precambrian Res. 50 : 69-88.

Ahmad, T., Tarney, J. and Mukherjee, P.K., 1991. Proterozoic mafic magmatism in Himalayas : global comparison - constraints on the nature of lithospheric sources. In : Teixeria, W., Ernesto, M. and Oliveria, E.P. (eds.) Exten. Abst. International Symposium on Mafic Dykes, Sao Paulo, Brazil, pp. 33-37.

Sharma, A., Ahmad, T. and Mukherjee, P.K., 1993. Mafic magmatism in parts of Himalaya : Geochemical constraints on their source characteristics and attendant tectonics. Geosciences, 2: 74-87.

Ahmad, T. and Tarney, J., 1993. North Indian Proterozoic volcanics, products of lithospheric extension: geochemical studies bearing on lithosphere derivation rather than crustal contamination. In : Cassyap, S.M., Valdiya, K.S., Khain, V.E., Milanovsky, E.I. and Raza, M. (eds.) Rifted Basins and Aulacogens: Geological and Geophysical Approach, pp. 130-147.

Hamatteh-Abu, Z.S.H., Raza, M. and Ahmad, T., 1994. Geochemistry and petrogenesis of early Proterozoic basic volcanic rocks of Jharol group, Rajasthan, Northwestern India. Jour. Geol. Soc. India, 44 : 141-156.

Bhat, M.I., Le Fort, P. and Ahmad, T., 1994. Bafliz volcanics NW Himalayas : origin of a bimodal-tholeiite alkali basalt suite. Chemical Geol., 114 : 217-234.

Ahmad, T. and Tarney, J., 1994. Geochemistry and petrogenesis of Late Archaean Aravalli Volcanics, basement enclaves and granitoids, Rajasthan. Precambrian Res. 65 : 1-23.

Ahmad, T., Islam, R., Khanna, P.P. and Thakur, V.C. 1996. Geochemistry, petrogenesis and tectonic significance of the basic volcanic units of the Zildat ophiolitic melange, Indus Suture Zone, eastern Ladakh, India. Geodinamica Acta. 9, 222-233.

Ahmad, T., Thakur, V.C., Islam, R., Khanna, P.P. and Mukherjee, P.K. 1998. Geochemistry and geodynamic implications of magmatic rocks from the Trans-Himalayan arc. Geochemical Jour. 32: 383-404.

Ahmad, T., Khanna, P.P. Chakrapani, G.J. and Balakrishnan, S. 1998. Geochemical characteristics of water and sediments of the Indus river, Trans-Himalaya, India: Constraints on weathering and erosion. Jour. Asian Earth Sciences, 16, 333-346.

Islam, R., Upadhyay, R., Ahmad T., Thakur, V.C. and Sinha A.K.1998. Pan-African magmatism and sedimentation in the NW Himalaya. Gondwana Research , 2, 263-270.

Ahmad, T., Mukherjee, P.K. and Trivedi, J.R. 1999. Geochemistry of Precambrian mafic magmatic rocks of the Western Himalaya, India: petrogenetic and tectonic implications. Chemical Geol., 160, 103-119.

Ahmad, T., Harris, N.B.W., Bickle, M.J., Chapman, H., Bunbury, J. and Prince, C. 2000. Isotopic constraints on the structural relationships between the Lesser Himalayan series and the Higher Himalayan series, Garhwal Himalaya. Geol. Soc. Amer. Bull. . 112, 467-477.

Mondal, M.E.A. and Ahmad, T. 2001. Bundelkhand mafic dykes, Central Indian Shield: implications for the role of sediment subduction in Proterozoic crustal evolution. The Island Arc, 10, 51-67.

Bickle, M.J., Harris, N.B.W., Bunbury, J.M., Chapman, H.J., Fairchild, I.J. and Ahmad, T. 2001. Controls on the $^{87}Sr/^{86}Sr$ ratios of carbonates in the Garhwal Himalaya, headwaters of the Ganges. Jour. Geology, 109: 737-753.

Kojima, S., Ahmad, T., Tanaka, T., Bagati, T.N., Mishra, M., Kumar, R., Islam, R. and Khanna, P.P. 2001. Early Cretaceous radiolarians from the Indus suture zone, Ladakh, northern India. News of Osaka Micropaleontologists, Spec. Vol. No. 12, p. 257-270.

Kojima, S., Gozu, C., Itaya, T., Ahmad, T., and Islam, R. 2002. Geology of Ladakh Himalaya, northwestern India. Jour. Geol. Soc. Japan, 108 : VII – VIII.

Ahmad, T, Harris, N.B.W., Tanaka, T., Bickle, M.J., Chapman, H., Khanna, P.P. and Bunbury, J. 2003. Nd-, Sr-isotopic and geochemical constraints on the source characteristics and petrogenesis of arc volcanics from the Shyok suture zone, Ladakh, India. Himalayan Tectonics (The Himprobe Results) Extn. Abst. Vol. pp 10-13, IIT Roorkee.

Bickle, M.J., Bunbury, J.M., Chapman, H.J., Harris, N.B.W., Fairchild, I.J. and Ahmad, T. 2003. Fluxes of Sr into headwaters of the Ganges. Geochim. Cosmochim. Acta, 67: 2567-2584.

Islam, R., Ahmad, T. and Rawat, B.S. 2003. Geochemistry and petrogenesis of the Phe volcanics, Zanskar, Western Himalaya: bearing on the birth of Neo-Tethys. Mem. Geol. Soc. India, 52: 339-357.

Hussain, M.F., Mondal, M.E.A. and Ahmad, T. 2004. Petrological and geochemical characteristics of the gneisses and granitoids from the Bastar craton, Central India: implication for subduction related magmatism. Gondwana Res., 7: 531-537.

Hussain, M.F., Mondal, M.E.A. and Ahmad, T. 2004. Geochemisrty of the basement gneisses and gneissic enclaves from Bastar craton: Geodynamic implications. Current Sci., 11: 1543-1547.

Ahmad, T., Harris, N.B.W., Islam, R., Khanna, P.P., Sachan, H.K. and Mukherji, B.K. 2005. Contrasting mafic magmatism in the Shyok and Indus Suture Zones: Geochemical constraints. Himalayan Geol., 26: 33-40.

Bickle, Chapman, H.J., Bunbury, J.M., M.J., Harris, N.B.W., Fairchild, I.J., Ahmad, T. and Pomies, C. 2005. Relative contribution of silicate and carbonate rocks to riverine Sr fluxes in the headwaters of the Ganges. Geochim. Cosmochim. Acta, 69: 2221-2240.

Hussain, M.F., Mondal, M.E.A. and Ahmad, T. 2005. Geodynamic evolution and crustal growth of the Indian shield: evidence from geochemistry of gneisses and granitoids. Proc. Indian Acad. Sci. (Earth Planet. Sci.) 113: 699-714.

Islam, R., Ahmad, T. and Khanna, P.P. 2005. An overview on the granitoids of the NW Himalaya. Himalayan Geol., 26: 49-60.

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Sachan, H.K., Mukherjee, B.K. and Ahmad, T. 2005. Cold subduction of the Indian continental crust: evidence from Tso-Morari region, Ladakh, India. Himalayan Geol., 26:25-32.

Gozu, C., Itaya, T., Hyodo, H., and Ahmad, T. 2006. Cretaceous isochron ages from K-Ar and $^{40}Ar/^{39}Ar$ dating of eclogitic rocks in the Tso Morari Complex, western Himalaya, India. Gondwana Res., 9: 426-440.

Mondal, M. E. A., Hussain, M. F. and Ahmad, T. 2006. Continental Growth of Bastar Craton, Central Indian Shield during Precambrian via Multiphase Subduction and Lithospheric Extension/Rifting: Evidence from Geochemistry of Gneisses, Granitoids and Mafic dykes. Jour. Geosciences, Japan, 49: 137-151.

Ehiro, M., Kojima, S., Sato, T., Ahmad, T. and Ohtani, T. 2007. Discovery of Jurassic ammonoids from the Shyok Suture Zone to the northeast of Chang La Pass, Ladakh, northwest India and its significance. Island Arc, 16: 124-132.

Kumar, A. and Ahmad, T. 2007. Geochemistry of mafic dykes in parts of Chotanagpur Gneissic Complex: petrogenetic and tectonic implications. Geochemical Journal, 41: 173-186.

Mondal, M. E .A., Hussain, F.H. and Ahmad, T. 2007. Geochemistry and petrogenesis of the Proterozoic mafic dyke swarms of Bastar craton of central Indian shield. Jour. Appl. Geoch., 9: 17-27.

Ahmad, T., Dragusanu, C. and Tanaka, T. 2008. Provenance of Late Archean Aravalli mafic rocks from Rajasthan, Northwestern India: Nd isotopes, evidence for enriched mantle reservoirs. Precambrian Res., 162: 150-159.

Chambers, J., Argles, T., Horstwood, M., Harris, N.B.W., Parrish, R. and Ahmad, T. 2008. Tectonic implications of Palaeoproterozoic anatexis and Late Miocene metamorphism in the Lesser Himalayan Sequence, Sutlej Valley, NW India. Jour. Geol. Soc. London, 165, 725-737.

Ahmad, T. 2008. Precambrian Mafic Magmatism in the Himalayan Mountain Range. Jour. Geol. Soc. India, 72, 85-92.

Ahmad, T., Tanaka, T., Sachan, H.K., Asahara, Y., Islam, R. and Khanna, P.P. 2008. Geochemical and isotopic constrains on the age and origin of the Nidar ophiolitic complex, Indus suture zone, Ladakh, India. Tectonophysics, 451, 206-224.

Ahmad, T., Deb, M., Tarney, J. and Raza, M. 2008. Proterozoic mafic volcanism in the Aravalli-Delhi Orogen, Northwestern India: Geochemistry and tectonic framework. Jour. Geol. Soc. India, 72, 93-111.

Hussain, M. F., Ahmad, T. and Mondal, M. E. A. 2008. Geochemistry of the Precambrian Mafic Dyke Swarms of the Central and Northeastern Parts of Bastar Craton, Central India: Constraints on Their Enrichment Processes. In: INDIAN DYKES: Geochemistry, Geophysics and Geochronology **(**Editors: Rajesh K. Srivastava, Ch. Sivaji and N. V. Chalapathi Rao), Narosa Publishing House Pvt. Ltd., New Delhi, India, pp. 397-412.

Caddick, M.J., Bickle, M.J., Harris, N.B.W., Holland, T.J.B., Horstwood, M.S.A., Parrish, R. and Ahmad, T. 2007. Burial and exhumation history of a Lesser Himalayan schist: Recording the formation of an inverted metamorphic sequence in NW India. Earth and Planetary Sciences Letters, 264: 375-390.

Wanjari, N. and Ahmad, T. 2007. Geochemistry of Kalpatri granitoids and mafic enclaves, Amgaon Gneissic Complex, Central India. Gondwana Geol. Mag. Spec. Vol. No. 10, 55-64.

Mondal, M.E.A., Chandra, R. and Ahmad, T. 2008. Precambrian Mafic Magmatism in Bundelkhand Craton. Jour. Geol. Soc. India, 72, 113-122.

Ahmad, T. and Jayananda, M. 2008. Plutonism and Precambrian Magmatism in India. In: Glimpses of Geoscience Research in India. The Indian report to IUGS 2004-2008 (Editors:A. K. Singhvi, A. Bhattacharya and S. Guha). Indian National Science Academy, New Delhi, pp. 160-173.

Ram Mohan, M., Rajasekhar, V.B., Charan, S.N., Balaram, V. and Ahmad, T. 2008. Geochemistry of the foliated, coarse-grained amphibolites from the southern part of Gadag Greenstone Belt, Karnataka. Jour. Geol. Soc. India, 72, 484-494.

Shrivastava, R. K. and Ahmad, T. 2008. Precambrian mafic magmatism in the Indian shield: An introduction. Jour. Geol. Soc. India, 72, 9-13.

Mondal, M. E. A., Raza, M. and Ahmad, T. 2008. Geochemistry of the Mafic Dykes of the Aravalli-Bundelkhand Proto-Continent: Implications for Sub-Continental Lithosphere Evolution of North Indian Shield. In: INDIAN DYKES: Geochemistry, Geophysics and Geochronology (Editors: Rajesh K. Srivastava, Ch. Sivaji and N. V. Chalapathi Rao), Narosa Publishing House Pvt. Ltd., New Delhi, India, pp. 527-545.

Zyabrev, S.V., Kojima, S. and Ahmad, T. 2008. Radiolarian biostratigraphic constraints on the generation of the Nidar ophiolite and the onset of Dras arc volcanism: Tracing the evolution of the closing Tethys along the Indus-Yarlung_Tsangpo suture. Stratigraphy" 5, 99-112.

Ahmad, T., Longjam, K. C., Fouzdar, B., Bickle , M. J. and Chapman, H. J. 2009. Petrogenesis and tectonic setting of bimodal volcanism in the Sakoli Mobile Belt, Central Indian Shield. Island Arc, 18, 155-174.

Srivastava, R.K. and Ahmad, T. 2009. Precambrian mafic magmatism in the Indian shield: Retrospect and prospect. Jour. Geol. Soc. India, 73, 7-11.

Khanna, P.P. Ahmad, T. And Islam, R. 2009. Effect of acidification in water samples before and after filteration: A caution for hydro-geochemical studies. Cuurrent Sci., 96, 496-497.

Chambers, J., Caddick, M. Argles, T., Horstwood, M., Sarah Sherlock, S., Harris, N., Parrish, R., and Ahmad, T. 2009. Empirical constraints on extrusion mechanisms from the upper margin of an exhumed high-grade orogenic core, Sutlej Valley, NW India. Tectonophysics, 477, 77-92.

Thanh, N.X., Itaya, T., Ahmad, T. Kojima, S., Ohtani, T. and Ehiro, M. 2009. Mineral chemistry and K-Ar ages of plutons across the Karakoram fault in the Shyok-Nubra confluence of northern Ladakh Himalaya, India. Gondwana Res., 17, 180-188.

Hussain, M. and Ahmad, T. 2009. Geochemical characteristics of the Granitoids of Mikir Hills massif of Shillong Plateau, Northeast India: implication for Pan-African Magmatic Activity. Journal of the Virtual Explorer, Electronic Edition, ISSN 1441-8142, volume 32, paper 4. doi: 10.3809/jvirtex.2009.00250, pp. 1-14.

Alam, M., Naushad, M., Wanjari, N. and Ahmad, T. 2009. Geochemical characterizations of mafic magmatic rocks of the Central Indian Shield: Implication for Precambrian crustal evolution. Journal of the Virtual Explorer, Electronic Edition, ISSN 1441-8142, volume 32, paper 8, doi: 10.3809/jvirtex.2009.00246, pp. 1-21.

Mishra, M. K., Devi, S. J., Kaulina, T., Dass, K. C., Kumar, S. and Ahmad, T. 2011. Petrogenesis and tectonic setting of the Proterozoic mafic magmatic rocks of the Central Indian Tectonic Zone, Betul area: geochemical constraints. In:. R.K. Srivastava (ed.), *Dyke Swarms: Keys for Geodynamic Interpretation*, 189, DOI 10.1007/978-3-642-12496-9_11, C _ Springer-Verlag Berlin Heidelberg

Longjam, K. C. and Ahmad, T. 2011. Geochemical characterization and petrogenesis of Khairagarh volcanics: implications for Precambrian crustal evolution. Geological Journal Published online in Wiley Online Library (wiley online library.com). DOI: 10.1002/gj.1312

White, L. T., Ahmad, T., Ireland, T. R., Lister, G. S. and Forster, M.A. 2011. Deconvolving episodic age spectra from zircons of the Ladakh Batholith, northwest Indian Himalaya. Chemical Geol. 289, 179-196.

White, L. T., Ahmad, T., Lister, G. S. Ireland, T. R (2011) Where does Indian plate and the Eurasian plate begin? Geology, Geochemistry, Geophysics G3 Vol. 12, Q10013, 6 PP., 201, doi:10.1029/2011GC003726

Mishra, M.K., Ahmad, T., Kaulina, T. V., Alam, M., 2001. Geochemical characterisation, Sm-Nd and U-Pb zircon chronology of the Tirodi Gneissic Complex, Central Indian Tectonic Zone – constraints on the Proterozoic crustal evolution. Precambrian Res (Submitted)

White, L. T., Ahmad, T., Lister, G. S. Ireland, T. R., and Forster, M.A. 2011. Is the switch from I- to S-type magmatism in the Himalayan Orogen indicative of collision of India and Asia? Australian Journal of Earth Sciences (In Press)

Highlights of major Scientific contributions by Prof. T. Ahmad

Geochemical and isotopic studied the Precambrian mafic magmatic rocks form the northern India shield (Aravalli and Central India regions: Ahmad and Rajamain, 1991; Ahmad and Tarney 1994; Kumar and Ahmad 2007; Ahmad and Jayananda 2008; Ahmad et al. 2008a,b,c; 2009) and those from the Lesser Himalaya helped in understanding the Precambrian lithospheric extension and opening of Aravalli and Lesser Himalayan rift basins (Ahmad and Bhat 1987; Ahmad and Tarney 1991; Ahmad 2008). Similar studies on the Cretaceous magmatic rock of the Indus and Shyok Suture Zones, Ladakh helped in understanding of the closure of the Neo-Tethyan ocean by northward subduction of the Neo-Tethyan ocean floor under the Eurasian plate (Ahmad et al., 1996, 1998, 2005; 2008).

Nd-isotopic profiling across major structural /metamorphic units indicate that the Vaikrita Thrust is the „real" Main Central Thrust (MCT). Nd model ages and epsilon Nd values indicate that the high grade Vaikrita Group rocks have much younger mantle extraction ages compared to the Lesser Himalayan sequences. Thus the Vaikrita Group is not the basement for the Lesser Himalayan sequences, rather the former could be basement for the Tethyan Sedimentary Sequences (Ahmad et al., 1999, 2000).

Separated zircon crystals from Ladakh and Karakoram batholiths display zoned zircon crystals typically observed in igneous rocks. U-Pb zircon SHRIMP ages obtained for the Khardun La and Chang La top samples is circa 58 Ma. A Karakoram Batholith sample near Tangste Gompa gives an age of circa 32 Ma. One zircon grain from this sample gave a late Permian age, and this may indicate the involvement of older crust in the batholith. One leucocratic granitic dyke sheet sampled between Darbuk and Shyok villages has a mixture of zircon crystals that gave a range of ages between 15 Ma and 97 Ma. Several grains gave ages ranging between 250 – 970 Ma. These older ages may indicate that older crust was involved in the generation of part of the Karakoram Batholith (possibly the southern portion of the Tibetan slab?). Recent suggestions that collision was as late as 35 Ma may need serious consideration in the light of magmatic zircon ages of 32-36 Ma by Prof. Ahmad and his co-workers from ANU (Ahmad et al. 2008).

Recent and on going studies by Prof. Ahmad in the Central Indian Tectonic Zone indicate major role of bi-modal volcanism during Proterozoic Crustal evolution in the Central Indian Shield (Ahmad et al., 2009). Sm-Nd and U-Pb zircon age data from the Amgaon-Tirodi basement rocks indicate first extraction of the crust from mantle started during Archean (~3100 Ma) and the first remobilized granitic melt were generated during early Proterozoic (~2400Ma).