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**RESEARCH GROUP: PETROLOGY & GEOCHEMISTRY**

**FIELD OF SPECIALIZATION: MINERALOGY, FLUID INCLUSIONS, METAMORPHIC GEOLOGY,**

**EDUCATION:**

<u>Degree</u>	<u>Year</u>	<u>(University/Institute)</u>	<u>Title of thesis</u>
<b>B.Sc</b>	<b>1982</b>	<b>Garhwal University</b>	
<b>M.Sc. (Geology)</b>	<b>1984</b>	<b>Garhwal University</b>	
<b>Ph.D (Geology)</b>	<b>1987</b>	<b>Banaras Hindu University Varanasi, BHU</b>	<b><u>Thesis title-</u> A petrographic and genetic study of Zawar Pb-Zn deposit, District Udaipur, (Rajasthan, india)</b>
<b>Ph.D (Mineralogy)</b>	<b>1990</b>	<b>Comenius University, Bratislava, Slovak Republic</b>	<b><u>Thesis title-</u> Physico-chemical conditions for the formation of Dubrava antimony deposit, Nizke Tartry Mts. Slovak Reb.</b>

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**PROFESSIONAL EXPERIENCE:**

Details of professional experience starting from the most recent position.

Sl. No	From	To	Designation	Employee Details	Additional Information/ Comments, if any
	2017	Continue	Scientist-G	WIHG,Dehra Dun	
	2012	2017	Scientist-F	WIHG,Dehra Dun	
	2006	2011	Scientist-E	WIHG,Dehra Dun	
	2001	2006	Scientist-D	WIHG,Dehra Dun	
	1996	2001	Scientist-C	WIHG,Dehra Dun	
	1991	1996	Scientist-B	WIHG,Dehra Dun	
	1990	1991	Pool scientist (CSIR)	Deptt.of Geology,BHU	
	1987	1990	Research fellowship through Ministry of HRD,Govt.of India	Comenius University,Bratislava, Slovak Republic	For Ph.D
	1984	1987	JRF (BHU)	Deptt.of Geology,BHU	For Ph.D

**VISITING POSITIONS:**

**TEACHING EXPERIENCE: ONE YEAR (1991-1992) TEACING M.SC CLASSES IN DEPTT. OF GEOLOGY,BHU,VARANASI**

**SERVICES:**

- a. Supervision/Guidance to Ph.D. Students:
- b. Awarded 3

(i) Ph.D thesis by **Shri B.K.Mukherjee** entitled “Metamorphic and Fluid Evolution of ultra high – pressure rocks from Tso-Morari Crystalline Complex, Indus Suture Zone, Ladakh (India)”. Awarded by Garhwal University in June 2003

(ii) The Ph.D thesis of **Shri Shashipal Singh** under co-supervision of Dr.H.K.Sachan with Dr.B.P.Singh of Jammu University has been awarded by Jammu University in March 2004 entitled “Comparative Study of Precambrian Evaporites from Himachal Pradesh and Jammu Region”.

(iii) Ph.D thesis of **Miss Zuhi Khan** under co-supervision of Prof.A.H.M. Ahmad of Aligarh Muslim University awarded by Aligarh Muslim University in July 2019 entitled “ Facies analysis,Petrography and Diagenesis of (Middle to Late Jurassic) Jumara Dome Sediments,Kachachh,Gujrat.

**c. Under supervision; 3**

**b. Training:** Two weeks of training at Bremen (Germany) in 2013 for Stable isotope mass spectrometer

**c. TEACHING:** ONE YEAR (1991-1992) TEACHING M.SC CLASSES IN DEPTT. OF GEOLOGY,BHU,VARANASI

**d. Membership: Member: Geological Society of India.**

**Member: Asian current Research of Fluid Inclusion.**

**Member: Indian Science Congress Association.**

**e. Editorial Board: Member of Editorial Board of International Journal of Earth Sciences & Engineering**

**f. International/National Seminars/Workshop:**

- 1) Mukherjee Barun K., Sumit K. Ghosh, Rohtash Kumar, Himanshu K. Sachan, Koushik Sen, Does Tibetan uplift influence the rate of sedimentation in Foreland Basin? IGC 2009, Oct. WIHG Dehradun
- 2) Mukherjee Barun K., Nature of fluid –rock interaction during upliftment, MBCT 2008, Oct. WIHG Dehradun.

- 3) Mukherjee Barun K., Sachan Himanshu K. & Yamamoto Shinji, Evidence of UHPM from Tso Morari Gneiss, Indus Suture Zone, Himalaya: implication from zircon mineralogy, Quebec Meeting, May, 2008, Canada.
- 4) Sachan Himanshu K. & Mukherjee Barun K. Mantle chemistry through tiny methane inclusion, IIT Bombay, March 2008, Bombay.
- 5) Mukherjee Barun K. & Sachan Himanshu K. Fate of UHPM in Himalaya, MTM 2007, Kumaon University, Nainital.
- 6) Sachan Himanshu K. & Mukherjee Barun K. Brine rich hydrothermal fluid circulation in the upper level of Nidar Ophiolite Sequences , Ladakh : evidences from fluid inclusions, Geocollision 2007, 20-21 Sep., WIHG, Dehradun.
- 7) Ahmad Talat, Sachan Himanshu K., Rafiq Islam, Param Pal Khanna & Mukherjee Barun K., Life cycle of suprasubduction zone Nidar ophiolite complex, eastern Ladakh and some future thoughts on collision zone magmatism, Geocollision 2007, 20-21 Sep., WIHG, Dehradun.
- 8) Mukherjee Barun K. & Sachan Himanshu K. Tracing of Indian Continental Crust in to the mantle and back: a semantic approach, Geocollision 2007, 20-21 Sep., WIHG, Dehradun.
- 9) Mukherjee Barun K., Maruyama Shigenori, Sachan Himanshu K. & Ahmad Talat, Microdiamond preservation within garnet in the Puga Gneiss of Tso-Morari Region, Indus Suture Zone, Himalaya: a clue for UHPM from gneissic rock. (Invited Talk) AOGS, 9-14, July 2006, Singapore.
- 10) Ahmad Talat, Tanaka Tsuyoshita , Sachan Himanshu K. & Mukherjee Barun K., Petrogenesis of coesite bearing Tso Morari eclogites: isotopic and elemental constraints, 21st Himalayan Karakoram Tibet Work Shop, 29 March-2 April, 2006 , Cambridge, United Kingdom.
- 11) Mukherjee Barun K., Sachan Himanshu, Ahmad Talat & Maruyama Shigenori. An appraisal for UHP metamorphism from Microdiamond bearing rock of ISZ, Himalaya: a zircon mineralogy study using Raman Spectra. 21st Himalayan Karakoram Tibet Work Shop, 29 March-2 April, 2006 , Cambridge, United Kingdom.

- 12) Mukherjee Barun K. , Sachan Himanshu K. & Ahmad Talat, A new occurrence of microdiamond from Indus Suture Zone, Himalaya: Possible origin, 20th Himalayan Karakoram Tibet Work Shop, 29 March-2 April, 2005 ,Aussios, (Invited Talk) France.
- 13) Sachan Himanshu K. & Mukherjee Barun K., Fluid evolution of UHPM crust of Tso-Morari Region , Ladakh, Himalaya, (India) ,17<sup>th</sup> International workshop on EMI in the earth, 18-23, Oct 2004 Hyderabad, India.
- 14) Mukherjee Barun K. & Sachan Himanshu K., Garnet response Diamond pressure metamorphism from Tso-Morari region, Ladakh ,India , 19th Himalayan Karakoram Tibet Work Shop, 10-12<sup>th</sup> July, 2004 , Hokudai University, Hokudai, Japan.
- 15) Sachan Himanshu K., Mukherjee Barun K. & Talat Ahmad, Metamorphic and fluid Evolution of ultra -high metamorphosed crust of Tso-Morari region , Ladakh , Himalaya, (India) constrain from mineral chemistry and fluid inclusions, National seminar of Role of Fluid in the Crustal Evolution.... February 4-6, 2004, WIHG, DehraDun , India.
- 16) Mukherjee Barun K. & Sachan. Himanshu K., Signature of Continuous Subduction Process in the Himalaya, the 13 th Convention of Indian Geological Congress Silver Jubilee Celebration, December 26-28, 2003 at WIHG, DehraDun, India.
- 17) Ahmad Talat, Tanaka Teutse, Sachan Himanshu, Hodaoya H., Itaya T. and Mukherjee Barun K., Geochemical and isotopic constraints on the protolith of UHP eclogitic rocks from the Tso- Morari Crystallines, Ladakh Himalaya, India , Goldschimith Conference, Tokyo, Japan.
- 18) Mukherjee Barun K. & Sachan Himanshu K., Imprints of prograde metamorphism in the deep-seated rocks from ISZ, Ladakh, India. Geol.Soc.Ind., Annual Convention ,2- 5 Nov 2003. Goa India.
- 19) Sachan Himanshu K. & Mukherjee Barun K., Ultra-deep subduction of Indian continental crust. HIMPROB WORKSHOP, Indian Institute of Technology, Roorkee, 16- 17 Oct. 2003, India.
- 20) Sachan Himanshu K. & Mukherjee Barun K., Metamorphic and fluid evolution of Ultra-high metamorphosed (UHP) crust of Tso-Morari region, Ladakh, Himalaya,

(India): Constraints from Mineral Chemistry and Fluid Inclusions, Norway Eclogite field symposium 22-27 June 2003, Silje, Norway.

- 21) Mukherjee Barun K. & Sachan. Himanshu K., Subduction of Indian Plate > 90 Km: Signature of ultrahigh - pressure metamorphism from Tso-Morari Crystalline Complex, Indian Himalaya, at 18th Himalayan Karakoram Tibet Work Shop, 2-4 th April 2003 ETH- Ascona, Switzerland.
- 22) Sachan Himanshu K. & Mukherjee Barun K., Ultra high pressure metamorphism in Tso-Morari region, Ladakh, India. Geol.Soc.Ind., Annual Convention, 23- 25 Oct 2002, Chandigarh, India.
- 23) Sachan Himanshu K., Mukherjee Barun K., Ogasawara Y. Muko A., Yoshioka N. & Ishida H., New Discovery of Coesite from the Indian Himalaya, Abstract, 6<sup>th</sup> IEC, 3-4 Sep. 2001 at Tokyo, Japan.
- 24) Mukherjee Barun K & Sachan. Himanshu K., A record of Prograde metamorphism in UHP rock from Tso-morari Crystalline Complex, Ladakh India, Abstract, Seminar on Contribution to Himalayan Geology-22-25 Oct. 2001 at WIHG, Dehradun, India.
- 25) Mukherjee Barun K & Sachan. Himanshu K., First Mineralogic Indicator of ultra-high-pressure rock from Indian Himalaya, Abstract, Seminar in third Nepal Geological Congress on "Regional Geology....." 26-28 September 2001 at Kathmandu, Nepal.
- 26) Sachan Himanshu K., Mukherjee Barun K., Fluid Inclusion Studies of Eclogite from Tso- Morari, Ladakh, Himalaya : Implication for the exhumation of Subducted Indian Continental crust, Abstract, Seminar on " Challenges in Precambrian Geology in the millennium" 17-18 March 2001 at Mysore University, India.

**g. External Research Fund received & Project Handled:  
Completed Three Sponsored Research project and received about 50 lacs**

1. Modelling of Fluid Migration And Behavior In Subduction Related Metamorphism In Indus Suture Zone (ISZ) Ladakh from 1999-2003.
2. Ultrahigh- Pressure Metamorphism in Tso-Morari Region, Ladakh Himalaya: Implications for Deep Crustal Processes in Himalaya from 2003-2007. Co-P.I. is Prof. Talat Ahmad in this project
3. Fluid flow in Ladakh accretionary Prism, Indus suture zone: implication for modeling of flow process of subduction regime". From 2011-2015

**One Undergoing MOES Sponsor Research Project;**

“Tectono-thermal evolution of the Karakorum migmatites along Shyok and Tangtse Valleys, India:  
Implications on the tectonics of Karakorum region”

**h. Member of important Committees:**

**AWARDS/FELLOWSHIPS/HONORS/MEMORIAL LECTURES:**

- (i). **a. Awards/Medals/Prizes:** M.K.Ray Memorial Medal 1999 was awarded by Geological, Mining and Metallurgical Society of India on 21<sup>st</sup> June 2000 for best paper published in Economic geology.
- (ii). Best Research Paper award published in 2002 in Journal of Geological Society of India By WIHG on the research paper “Islam,R., Ghosh,S.K., Sachan,H.K.,(2002). Geochemical characterization of the Neoproterozoic Nagthat siliciclastics,NW Kumaon Lesser Himalaya: Implications for source rock assessment. Jour.Geol.Soc.India. V.60,91-105”.
- (iii). Second best research paper award during 13 th convention, Indian Geological Congress-2003 Silver Jubilee Celebrations.
- (iv). Best Research Paper award published in 2007 in Earth and Planetary Science Letters By WIHG on the research paper Sachan, H.K, Mukherjee, B.K. Bodnar.R. J., (2007) Preservation of methane generated during serpentinization of upper mantle rocks: Evidence from fluid inclusions in the Nidar ophiolite, Indus Suture Zone, Ladakh (India). Earth and Planetary Science Letters. V.257 , 47–59.
- (v). Best Research Paper award published in 2009-2010 in Geological Magazine By WIHG on the research paper Mukherjee, B.K.,Sachan, H.K (2009). Behavior of fluids in coesite bearing rocks of Tso-morari region, NW Himalaya: implication for exhumation process. Geological Magazine. V.146, 876–889

**b. Fellowships:**

- (vi). Junior Research Fellowship: Banaras Hindu University (BHU),Varanasi .

- (vii). Honored with Czechoslovakian Government Fellowship, through Ministry of Human Resource and Development, Government of India, New Delhi, 1987-90.
- (viii). Pool-Scientist: Council of Scientific and Industrial Research, New Delhi, Recipient of YOUNG SCIENTIST AWARD from Indian Science Congress Association of India, 1992
- (ix). Department of Science & Technology, Govt. of India Awarded BOYSCAST Fellowship for the year of 1996-1997 in Department of Geological Sciences, Virginia polytechnic Institute & State University, Blacksburg, Virginia, USA with Prof. R.J. Bodnar

**c. Memorial Lectures:**

**d. Recognition/Honors:**

**COUNTRIES VISITED: Norway, Japan, Germany, USA**

**NATIONAL/INTERNATIONAL (outside CSIR-NGRI) COLLABORATION:**

- 1. Dr. Chris Spenser, Department of Geological Sciences and Geological Engineering, Queen's University, Kingston, Ontario, Canada**
- 2. Prof. F. Rolfo & Prof. C. Groppo, Department of Earth Sciences, University of Turin, Italy,**

**Inside WIHG Collaborator:**

**PATENT -**

**SCHOLARSHIPS AWARDED, GATE**

**PH.D. ADVISOR: 3**

**TOTAL PUBLICATIONS IN STANDARD REFEREED JOURNALS: 58 (FIFTY EIGHT )**

**Total Citation = 821**

**H-Index = 16,**

**I10 index = 25**

**Total impact factor of publication: 82.5**



## LIST OF PUBLICATIONS

- 1) Sachan, H.K., Kantor, J. (1990) Sulphur isotopic study of Dubrava antimony deposit, Nizke-Tatry Mts. Czechoslovakia. *Geol. Carpathica*, v. 41, p. 749-757.  
(Impact factor: 1.16)
- 2) Sachan, H.K. (1991) Minor elements geochemistry and ore genesis of Zawar Pb-Zn deposit, District Udaipur, Rajasthan (India). *Acta. Geol. Geograph. Univ. Comen.*, v. 46, p. 215-231.
- 3) Sachan, H.K. (1991). Use of sphalerite geobarometry for estimation of pressure of formation of metamorphosed sulphide deposits. *Current Science*, v. 61, no. 8, p. 539-540.  
(Impact factor:0.88)
- 4) Sachan, H.K. & Chovan, M. (1991) Thermometry of arsenopyrite-pyrite mineralization in the Dubrava antimony deposit (Western Carpathians). *Geol. Carpathica.*, v. 42, p. 265-269.  
(Impact factor: 1.16)
- 5) Sachan, H.K. (1992) Physico-chemical properties of different generation of pyrites from Dubrava antimony deposits, Czechoslovakia: Implication for ore genesis. *Ind. Jour. Geochem.*, v. 7, p. 47-58.
- 6) Sachan, H.K. (1993) Early replacement dolomitization and deep-Burial modification and stabilization: A case study from the late Precambrian of the Zawar area, Rajasthan (India). *Carbonates & Evaporites*, v. 8, p. 191-198. (Impact factor: 0.947)
- 7) Sachan, H.K. & Sharma, R. (1993) Genesis of barite mineralization in south-west Garhwal Lesser Himalaya. *Jour. Him. Geol.*, v. 4, p. 165-170. (Impact factor 0.35)
- 8) Sachan, H.K. (1994) Fluid inclusion evidence for amphibolite-granulite facies transitional metamorphism in Delhi Supergroup of Rocks. *Jour. Geol. Society, India*, v. 43, p. 529-537.  
(Impact factor: 0.632)
- 9) Sharma, R. & Sachan, H.K. (1994) Epithermal stratabound barite mineralization around Doon Valley. *Current Science*, v. 66, p. 65-66.  
(Impact factor: 0.88)
- 10) Chovan, M. Hurai, V., Sachan, H.K. & Kantor, J. (1995) Origin of the fluids associated with granodiorite hosted Sb-As-Au-W mineralization at Dubrava (Nizke Tatry mts., Western Carpathians). *Mineralium Deposita*, v. 30, p. 48-54. (Impact factor: 3.47)
- 11) Sachan, H.K. & Ghosh, S.K. (1996) Fluid inclusion study of Neo-Proterozoic Nagthat siliciclastic sediments, NW Kumaun Lesser Himalaya (India) : Implication to quartz

cementation history. Jour. Geol. Soc. India, v. 47, p. 107-114.

(Impact factor: 0.632)

12) Sachan, H.K. (1996). Cooling history of subduction related granite from Indus suture zone, Ladakh (India) : Evidences from fluid inclusions. Lithos, v. 38, p. 81-92.

(Impact factor: 3.677)

13) Mohan A., Divyprakash, Sachan H.K. (1996). Fluid inclusions in charnockites from Kodaikanal massif (south India) : P-T record and implications for crustal uplift history. Mineralogy & Petrology, v. 57, p. 167-184.

(Impact factor: 1.664)

14) Sharma, R., Sachan, H.K., (1998). A study of the sulphide mineralization from Buniyar area (J&K): Evidences for genesis and evolution of the ores .Ind.Jour.Geol., v.70, p.307-320.

15) Baldwin, JA, Hodges, KV., Martin, MW., Sachan, HK., Sigoyer, J.De, (1998). Geological Society of America Abstracts with Programs, v.30, p.269

16) Sachan, H.K., Bodnar.R. J., Islam,R., Szabo, Cs., Law, R.D., (1999). Exhumation history of Eclogites from the Tso-morari crystalline complex in Eastern Ladakh: Mineralogical and fluid inclusion constraints. Jour. Geol. Soc. Ind. , v.53, p.181-190.

(Impact factor: 0.632)

17) Brian, P.J.O., Sachan H.K. (2000) Diffusion modeling in garnet from Tso morari eclogite and implications for exhumation models. Earth Science Frontiers., v. 2, p. 3-6.

18) Sachan, H.K., Mukherjee, B.K., Ogasawara, Y., Maruyama, S., Pandey, A.K., Muko, A., Yoshika, N., Ishida, H., 2001.Discovery of coesite from Indian Himalaya: consequences on Himalayan tectonics In Ultrahigh-Pressure Minerals (UHPM) Workshop, Waseda Univ., Tokyo, Japan Spec Publication, p. .A41-A47.

19) Sachan H. K., Sharma R., Sahai A., Gururajan N.S.(2001) Fluid events and exhumation history of the main central thrust ( MCT ) zone, Garhwal Himalaya (India). Jour. Asian. Earth. Sciences., v. 19, p. 207-221.

(Impact factor: 2.87)

20) Sachan. H.K., Mukherjee,B.K. (2001) Evidences Of Fluid Re-Equilibration In Blueschist Rocks From Shergol Ophiolitic Melange, Indus Suture Zone, Ladakh Himalayan Geology, v.22, p. 127-134. (Impact factor 0.35)

21) Mukherjee, B.K., Sachan, H.K. (2001).Discovery of coesite from Indian Himalaya: A record of ultra-high pressure metamorphism in Indian Continental crust. Current Science, v.81,

p.1358-1361.

(Impact factor:0.88)

- 22) Sachan, H.K. (2001).Supra subduction zone origin of Nidar ophiolitic sequence. Indus Suture Zone, Ladakh evidence from mineral chemistry of upper mantle rocks. *Ophioliti.*, v.26, p.23-32. (Impact factor: 1.00)
- 23) Islam, R., Ghosh, S.K., Sachan, H.K. (2002) Geochemical characterization of the Neoproterozoic Nagthat siliciclastics,NW Kumaon Lesser Himalaya: Implications for source rock assessment. *Jour. Geol. Soc. India*, v.60, p.91-105.  
(Impact factor: 0.632)
- 24) Sachan, H.K. & Mukherjee, B.K (2003) Genesis Of Chromite in Ophiolites From Indus Suture Zone, Ladakh India: Evidence From Mineral Chemistry Of Solid Inclusions In Chromite. *Himalayan Geology*, v.24, p.63-74.  
(Impact factor: 0.35)
- 25) Mukherjee B. K, Sachan H.K., Ogaswara Y., Muko A., Yoshika N. (2003) Carbonate-Bearing UHPM rock from Tso-morari region, Ladakh, India: Possible petrological implications. *International Geology Review*, v.45, p.49-69.  
(Impact factor: 2.87)
- 26) Mohan, A., Singh, P.K., Sachan,H.K., (2003) High-density carbonic fluid inclusions in charnockites from eastern Ghats, India: Petrologic implications. *Jour. Asian. Earth. Sciences*, v. 22, p.101-114.  
(Impact factor: 2.87)
- 27) Sharma, R., Verma,P., Sachan, H.K., (2003) Strontium isotopic constraints for the origin of barite mineralization of Tons Valley,Lesser Himalaya. *Current Science*, v.85, p. 653-656.  
(Impact factor: 0.88)
- 28) Mukherjee,B.K., Sachan, H.K., 2004.Garnet response diamond pressure metamorphism from Tso-Morari region, Ladakh, India, *Himalayan Journal of Sciences*, v.24, p. 209-210.
- 29) Pandey A. K., Sachan, H.K, Viridi N.S. (2004) Exhumation history of a shear zone constrained by microstructural and fluid inclusion techniques: an example from the Satluj valley,NW Himalaya, India. *Jour. of Asian Earth Sciences*, v. 23, 391–406.  
(Impact factor: 2.87)
- 30) Sachan H.K., Mukherjee B. K., Ogaswara Y., Maruyama S., Ishida H. Muko A., Yoshika N. (2004) . Discovery of Coesite from Indus Suture Zone (ISZ), Ladakh, India: Evidence for

Deep Subduction. *European Journal of Mineralogy* v.16, p.235-240.

(Impact factor: 1.19)

31) Mukherjee, B.K., Sachan, H. K., Ahmad, T. (2005) A new occurrence of microdiamond from Indus Suture zone, Himalata: a possible origin. *Géologie Alpine*, v. 44, p.136

32) Sachan, H.K., Mukherjee, B.K., Ahmad, T. (2005) Cold subduction of Indian continental crust: Evidence from Tso-morari region, Ladakh India. *Himalayan Geology* v.26, p. 25-33.

(Impact factor: 0.35)

33) Ahmad, T., Harris, N.B.W., Islam, R., Khanna, P.P., Sachan, H.K., Mukherjee, B.K. (2005) Contrasting mafic magmatism in The shyok and Indus Suture zone: geochemical constraints. *Himalayan Geology* v.26, p.34-40.

(Impact factor: 0.35)

34) Singh, B.P., Singh, S.P., Sachan, H.K (2006) Post-depositional transformation during burial and exhumation in the Neoproterozoic evaporite sequence, NW Himalaya, India. *Jour.Geol.Soc.India*, v.68, p. 1058-1068.

(Impact factor: 0.632)

35) Sachan, H.K, Mukherjee, B.K. Bodnar, R. J. (2007) Preservation of methane generated during serpentinization of upper mantle rocks: Evidence from fluid inclusions in the Nidar ophiolite, Indus Suture Zone, Ladakh (India). *Earth and Planetary Science Letters*, v.257, p.47-59.

(Impact factor: 4.58)

36) Sachan, H.K, Mukherjee, B.K., Ahmad, T. (2007) Brine-rich Hydrothermal fluid circulation in the upper level of Nidar Ophiolite Sequence, Ladakh : Evidences from Fluid inclusions. *Journal. Geol.Soc.India*, v.70, 780-786.

(Impact factor: 0.632)

37) Ahmad, T., Sivaprabha, S., Balakrishnan, S. S., Thanh, N.X., Itaya, T., Sachan, H.K., Mukhopadhyay, D.K., Khanna, P.P. (2008) Geochemical-isotopic characteristics and K-Ar ages of magmatic rocks from Hundar valley, Shyok Suture Zone, Ladakh Himalayan Journal of Sciences, v. 5, p.18-19

38) Ahmad, T., Tanaka, T., Sachan, H.K., Asahara, Y., Islam, R., Khanna, P.K., (2008) Geochemical and isotopic constraints on the age and origin of the Nidar Ophiolitic complex, Indus Suture zone, Ladakh, India. *Tectonophysics*, v. 451, p. 206-224. (Impact factor: 2.68)

39) Sen, K., Mukherjee, B.K., Sachan, H.K. (2009) Field and microstructural analysis of the Pangong Granodiorite, Ladakh (NW India): Implications for tectonics along the Karakoram

Fault Zone. *Current Science*, v.96. p.1124-1130.

(Impact factor: 0.88)

40) Mukherjee, B.K., Sachan, H.K. (2009) Behavior of fluids in coesite bearing rocks of Tsomorari region, NW Himalaya: implication for exhumation process. *Geological Magazine*. v.146, p. 876–889. (Impact factor: 2.34)

41) Sachan, H.K., Kohn, M. J., Saxena, A., Corrie, S.L. (2010) The Malari leucogranite, Garhwal Himalaya, northern India: chemistry, age, and tectonic implications. *Geol.Soc.Am.Bull*, v. 122, p. 1865–1876.

(Impact factor: 4.04)

42) Prakash, D., Prakash, S., Sachan, H.K. (2010) Petrological evolution of the high pressure and ultrahigh temperature mafic granulites from Karur, southern India: evidence for decompressive and cooling retrograde trajectories. *Miner. Petrol.*, DOI 10.1007/s00710-010-0123-9. (Impact factor: 1.664)

43) Spencer, C.J., Harris, R.A, Sachan, H.K., Saxena, A. (2011) Depositional provenance of the Greater Himalayan Sequence, Garhwal Himalaya, India: Implications for tectonic setting. *Jour. Asian Earth Sciences*, v.41, p.344-354.

(Impact factor: 2.87)

44) Sengupta N., Sengupta P., and Sachan, H.K. (2011). Aluminous and alkali-deficient tourmaline from the Singhbhum shear zone, East Indian shield: Insight for polyphase boron infiltration during regional metamorphism. *American Mineralogist*, v.96, p.732-767.

(Impact factor 2.65)

45) Saxena, A., Sachan, H.K., Mukherjee, P. K. and Mukhopadhyaya, D.K. (2012) Fluid-Rock interaction across the south Tibetan detachment, Garhwal Himalaya (India): Mineralogical and Geochemical Evidences. *Journal of Earth System Science*, v.121, p. 29-44

(Impact factor: 0.89)

46) Mukherjee, B.K., Sen, K., Sachan, H.K., Paul, S.K. (2012) Exhumation history of the Karakoram fault zone mylonites: New constraints from microstructures, fluid inclusions, and  $^{40}\text{Ar}$ - $^{39}\text{Ar}$  analyses. *LITHOSPHERE* v. 4, p.230-241.

(Impact factor: 2.662)

47) Sachan, H.K., Saxena, A., Verma, P., Rai, S. K., Kharya, A. (2013) Fluid inclusion study of the Higher Himalayan Quartzitic pelites, Garhwal Himalaya, India: Implications for recrystallization history of metasediments. *Journal of Geological Society of India* v.82, p. 509-518. (Impact factor: 0.632)

- 48) Bhattacharya, S., Panigrahi, M.K., Sachan, H.K., Kharya, A. (2014) Oxygen isotope ratio of quartz veins from the auriferous Ramagiri–Penakacherla schist belt and surrounding granitoids in the Eastern Dharwar craton: A case for a possible link between gold mineralization and granite magmatism. *Ore Geology Reviews*, v. 63, p.201–208. (impact factor 3.99)
- 49) Groppo, C., Rolfo, F., Sachan, H.K., Rai, S.K., (2016) Petrology of blueschist from the western Himalaya (Ladakh, NW India): Exploring the complex behaviour of a lawsonite-bearing system in a paleo-accretionary setting. *Lithos*, v. 252, p. 41-56  
(Impact factor: 3.78).
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Established Three state of Art Lab in Wadia Institute of Himalayan Geology,Dehra Dun

- a. Electron probe microanalyzer Lab(in 2006)
- b. High-precision thin section lab (in 2007) for thin section preparation of rocks
- c. Stable isotope lab for silicate and carbonate minerals (in 2011)

**(f) Reports/Other Documents:**

**(g) Articles in Proceeding Volumes**