

Curriculum-Vitae

Name Dr. SHYAM BIHARI DWIVEDI

Present Designation & Address for correspondence

Associate Professor

Department of Civil Engineering

Institute of Technology,,Banaras Hindu University

Varanasi-221005Tel. Residence: 0542-2575257 ,9792262852 (M)

Email : sbd11@rediffmail.com or sbdwivedi123@fastmail.fm or sbdcharu@yahoo.com

Nationality: Indian

Title of Ph.D. Thesis " Petrology and Mineralogy of the areas around Sokra, Datam and Mahawat Muria in district Palamau (Daltonganj),Bihar (Granulite facies rocks)"

Distinctions/Prize/Medal/Award/Honours

(1) BHU Research Fellowship (ii) SRF (CSIR) New Delhi (iii) RA (CSIR) (iv) DST Young Scientist Project (v) Pool Officer (CSIR)

Field of specialization Metamorphic Petrology, Mineralogy and Engineering

Geology

Consultant: Engineering geology related civil Engineering problems

Appointment held: (Attached supporting documents)

Designation	Grade	Name of Employer	Date of Joining	Date of leaving	Reason
URF	800	B.H.U.	1 st july,1990	30 th Sept.,1992	Higher
S.R.F	2800	C.S.I.R.	1 st Oct.,1992	31 st Dec.,1993	Higher
R.A.	8800	C.S.I.R.	1 st Jan,1994	31 st Oct.,1998	Higher

Pool Officer (8000-275-12500) 1st Nov.,1998 28th Sept.,1999 CSIR

In Department of Geology, Banaras Hindu University

Assistant Professor (1000\$/month) 28th Sept.,1999 to continue

Department of Applied Geology, Mekelle University through Ministry of
Education, Ethiopia, Africa (UNDP)

Reade, Department of Geology, Mizoram University (From 13th Dec.,2005 to 21st
Dec.,2007)

Teaching Experience (in years)- Postgraduate: 13years Undergraduate:13 years

b) **Research Experience (in years)** Doctoral: 4 years Post-doctoral : 7 years

c) **Field Experience:** 10 years for mapping of low and high -grade metamorphic rocks
from green schist to granulite facies. Also mapping experience of Barrovian types of
metamorphic rocks.

d) **Experience of guiding students:**

M.Sc. Dissertation. 6

M.Tech Dissetation-completed 3

Ph.D. Students Registered -2

e) **Administrative experience:** Serve as the head department of Applied Geology,
Mekelle University since sept.,2000 to June 2001.

Member Academic Commission, Faculty of Science and Technology, Mekelle
University Sept.,2000 to June,2001

Member School Board, School of Earth Science and Forestry Mizoram University
Dec.2005 to Dec.2007

Member School Board, School of Earth Physical Science, Mizoram University Dec.2006
to Dec.2007

Member of Scientific bodies and Societies

Geological Society of India

Journal of Applied Geochemistry

Indian Mineralogist and Mineralogical Society of India

Research projects Completed

1. Qualitative and quantitative evaluation of metamorphites hosted base metal / transition metal (Pb, Zn, Cu, Fe, Mn, Ni, Ag and Co) mineralization and its impact on groundwater and its chemistry in the area around Wikro, Negash and Hawzen, Tigray province, Northern Ethiopia. As Co-Pi 10 Million \$ (World Bank)
2. Hydrochemistry of the Volcanic rocks aquifers in Maichew area, Tigray region, Northern Ethiopia. As Co-Pi 2 Million \$ (World Bank)

Research Project in hand As Principal Investigator: DST , Govt. of India 30 Lakhs

entitled “P-T path and geodynamic evolution of amphibolite to granulite facies rocks of the Meghalaya Plateau, Meghalaya”

Additional information:-

Chief Editor : International Journal of Advances in Earth Science

Reviewer : Many International and National Journal of Repute

LIST OF PUBLICATIONS

Paper published in Journal

1. **Dwivedi, S.B. and K.Thenuo** (2012) Petrology and Geochemistry of Metapelites and basic granulites from Sonapahar Region of Shillong Meghalaya Gneissic Complex, North east India. Journal Geological Society of India (Springer) in Press
2. **Dwivedi, S.B. and K.Thenuo** (2012) Petrogenetic evolution of the basic granulites of the Sonapahar,

West Khasi Hills District, Meghalaya International Journal of Advances in Earth Sciences Vol.1 pp 1-5

3. **Lal, S.N., Prakash, D. and Dwivedi S.B. (2012)** A computer program for estimation of pressure condition in metamorphic rocks: Thermodynamic basis and uncertainties. International Journal of Basic and Applied Sciences Vol.1 No.1 pp.38-44
4. **Dwivedi, S.B. and K.Thenuo (2011)** Two-Pyroxene mafic granulites from Patharkhang, Shillong- Meghalaya, Gneissic Complex. Current Science)Vol.100, pp 100-105
5. **Dwivedi, S.B. (2011)** Geodynamic evolution of Mesoproterozoic granulites of Meghalaya: evident from geothermobarometry, P-T path and P-T pseudosection Memoir Geological Society of India No.77, Pp-1-16.
6. **Lal, S.N., Manju Pandey, Dwivedi, S.B. and Prakash D. (2011)** Petrology and Geochemistry of amphibolites and its implications on geodynamic evolution of Central Crystalline zone of Kumaun Himalaya, India. Geol. Soc. Memoir No. 77 pp 65-85
7. **Paramakusam, B.R., Srivastava, R.K. and Dwivedi, S. B. (2010)** Experimental Studies on Heavy Metal Extraction from Contaminated Soil Using Ammonium Citrate as Alkaline Chelate during the Electrokinetic Journal. Hazard. Toxic Radioactive Waste (ASCE) Vol. 15, pp.296-304
8. **Dwivedi, S.B., Ashutosh Kumar and Singh, S.P. (2010)** Granulites of Meghalaya and its petrological correlation with Central Indian granulites of Chhotanagpur and Bundelkhand. Journal of Economic Geology and Georesource Management Vol.7 pp152-167
9. **Singh, S.P. and Dwivedi, S.B. (2009)** Garnet-Sillimanite-cordierite-quartz bearing assemblages from early Archean Supracrustal rocks of Bundelkhand Massif, Central India. Current Science. Vol.97 pp103-107.
10. **Dwivedi, S.B. and Jimmy, L. 2008** : Mineral Chemistry and P-T conditions of Metamorphism of Leptynite from the area around North –East of Dumka, Jharkhand Journal of Applied Geochemistry Vol.10, pp 51-59
11. **Dwivedi, S.B., Jimmy, L., Vanthangliana, V, and Lal S.N. 2007**: Refined Garnet-Biotite thermometer: Constraints from empirically derived Margules parameters for garnet and Biotite, The Indian Mineralogist Vol.41 pp 97-111
12. **Dwivedi, S.B., Lal, S.N. and Pandey, M., 2006** : The stability of dehydration equilibria involving annite,

ferrosilite, sanidinite, quartz and H₂O in KFLASH system and its application as hygrometer on charnockites. **Indian journal of Geochemistry Vol.21 pp. 58-67**

- 13 Lal, S.N, **Dwivedi, S.B.**, and Pandey,M. 2006. Metamorphic evolution of sapphirine granulites from Anakapalle , Eastern Ghats Granulite Belt, India. **Indian Journal of Geochemistry Vol.21 pp. 10-22**
- 14 Kuster,D, **Dwivedi,S.B.**,Kurkura,K , Mehari, K and Matheis,G (2005): Petrogenetic reconnaissance investigation of mafic sills associated with flood basalts, Mekelle basin, northern Ethiopia: implication for Ni-CU exploration. **Journal of Geochemical Exploration (Elsevier)Vol.85 pp 63-79.**
- 15.. Kuster,D, **Dwivedi,S.B.**, Kurkura,K and Mehari, K (2003): Chalcophile element depletion in mafic sills of the Mekelle basin, Tigrai: a guide to Ni-Cu-PGE exploration in the Ethiopian flood basalt province. **Mineral Exploration and Sustainable Development, Eliopoulos et al.(eds) Millpress, ISBN9077017771. pp 605**
16. **Dwivedi, S. B.** (1999): Gedrite - bearing garnet - cordierite- hypersthene mineral mineral parageneses from the south-west of Daltonganj,Chhotanagpur granite-granulite gneiss complex, Bihar . **Proceeding for International conference on granulites and Charnockites, Madras,India pp 20-32.**
17. **Dwivedi,S.B.**,Mohan,A, and Lal,R.K.(1998): Recalibration of Fe-Mg exchange reaction between garnet and cordierite as a thermometer. **European Journal of Mineralogy V.10, pp. 281-289.**
18. **Dwivedi,S.B.** (1998): Oxygen fugacity (fO₂) during metamorphism of granulites of the area around Daltonganj,western Chhotanagpur,Bihar. **Indian Mineralogist V.30 pp. 20-22.**
19. **Dwivedi,S.B.**,Mohan,A. and Lal,R.K. (1997): Internally consistent geothermo -barometers in the system FeO-MgO-Al₂O₃-SiO₂-H₂O involving garnet, cordierite,aluminosilicate and quartz and their application to metapelites. **Journal Geological Society of India,V.49, pp 647-660.**
- 20..**Dwivedi,S.B.** (1996) : Non-ideal binary mixing in cordierite: constraints from experimental data on Mg-Fe partitioning in garnet and cordierite and a reformulation of garnet-cordierite geothermometers. **Proc. Earth and Planetary Sciences, Indian Academy of Science,,Earth System science (Springer) Vol.105, No.4 pp. 365-377.**
21. Prakash,D and **Dwivedi,S.B.**. (1994): Ocean- A future potential Resources Reservoir. Everyman Science Vol.29,No.4 pp.109-114.
22. **Dwivedi,S.B.**,Singh,T.N. and Prakash,D. (1993): Precambrian metamorphites of the area around Kandra,district Singhbhum,Bihar. **Indian Journal of Engineers, Vol.23, No.1&2 pp. 195-206.**
23. **Dwivedi,S.B.** and Lal,S.N. (1992): Prograde Barrovian types of metamorphism of pelitic rocks

around Kandra, district Singhbhum, Bihar. **Proc. Indian National Science Academy, V.58A, No.3 ,pp.195-206.**

Full Papers in Conference Proceedings and Edited Volume

- 24. Mishra Umank, Pandey, K.K. and Dwivedi, S.B. (2011)** Forecasting of ground water level of Sigma Tehsil Raipur district, Chhatisgarh Using Artificial Neural Network. Proceeding National Conference on Recent advances in Civil Engineering, RACE-2011, IT, BHU pp.590-597
- 25. Kumar, R. Jain, H. and Dwivedi, S.B. (2011)** Channel and cored unit for roofing /flooring for low cost housing: A review . Proceeding National Conference on Recent advances in Civil Engineering, RACE-2011, IT, BHU pp.294-298
- 26. Dwivedi, S.B. and K. Thenuo (2011)** Average P-T estimate and mineral chemistry of the two pyroxene bearing granulites from Sonapahar west Kashi Hills District, Meghalaya, Proceeding National Conference on Recent advances in Civil Engineering, RACE-2011, IT, BHU pp.349-354
- 27. Lal, S.N. and Dwivedi, S.B. (2011)** Paleolake valleys of Kumaun Lesser Himalaya: Potential source of Drinking water. Proceeding of the National Conference on groundwater for drinking : issues and options, Feb.11-13, 2011, Department of Civil Engineering, Institute of Technology, BHU, Varanasi-221005 (2011) pp 186-191
- 28. Dwivedi, S.B. and Pandey, K.K. (2011)** Multivariate analyses and its application to derive Margules parameters for Garnet (ΔW_{Ca} & ΔW_{Mn}) and biotite (ΔW_{Al} & ΔW_{Ti}) and its implication in Mg-Fe exchange Garnet-Biotite thermometer (Proceeding National Conference on Mathematical Modeling and Computer Simulation MMCS 2011, March 25- 27, 2011, Department of Applied Mathematics, Institute of Technology, BHU, Varanasi-221005, pp.32-36
- 29. Thenuo, K. and Dwivedi, S.B. (2011)** Earthquake its terminologies and seismic zone of India: A review
Proceeding All India Biennial Civil Engineering conference on Advances in Civil engineering April 1-3 2011 pp 80-94
- 30. Hussain, M.F., Dwivedi, S.B. and Mondal M.E.A (2009)** Chalcophile element characteristic in mafic dykes from central and northeastern parts of Bastar craton: A guide to Ni-Cu-PGE Mineralization. Macmillan Advanced Research Series Edited by Santosh Kumar Magmatism, Tectonism and Mineralization Pp.312-321

Paper published in Seminar/Symposium

- 31. Dwivedi, S. B. and Theunuo,K.** (2012) Petrogenetic evolution of Mesoproterozoic granulites of Meghalaya: Evident from Geochemistry, Geothermobarometry,P-T path and P-t Pseudosection. National Seminar on Geology and Geo-resources of Himalaya and Cratonic Regions of India (GGHCRI-2012) March 10th to 12th ,2012 pp.92-93
- 32.Dwivedi, S. B. and Theunuo,K.** (2012) Trace element and REE Geochemistry of granulite from Sonapahar region of shillong Meghalaya Gneissic Complex(SMGC),Meghalaya National Seminar on Recent Advances and future Challenges in Geochemistry and Geophysics: the Indian Scenario, Feb.,22-24,2012,Department of Geology ,BHU,p.103.
- 33. Dwivedi, S. B. and Theunuo,K.** (2011) Precambrian Granulites of Shillong Meghalaya Gneissic Complex (SMGC) and its implication on crustal evolution of Northeastern India. International Symposium on “ Precambrian Accretionary Orogens and Field Workshop in the Dharwar Craton Southern India, 2-11 Feb.,2011,University of delhi,Delhi and Geological society of India, Bangalorepp.23-24
- 34. Dwivedi,S. B. and Theunuo,K.** (2010) Geodynamic evolution of Mesoproterozoic granulite Meghalaya
and its petrological correlation with Mesoproterozoic Central Indian granulites of Chhotanagpur and Bundelkhand. National Symposium on “ Geology and Mineral Resources of Bundelkhand Craton (GMRB-2010) ,08-10 Ocotober-2010,Department of Geology,Institute of Earth Sciences,Bundelkhand University,Jhansi-284128
- 35. Dwivedi, S. B.** (2009): Tectonism Metamorphic Evolution of Mesoproterozoic Granulites of the Area
Around Sonapahar, West Kashi Hills District, Meghalaya, India,2nd
Precambrian
Continental Growth and Tectonism, February 24–28, 2009 pp 124-125
- 36. Dwivedi S. B. and Singh,B.N.**(2009)Metamorphic Evolution of the Granulites from the AreaAround
NE
of Dumka, Jharkhand, 2nd Precambrian Continental Growth and Tectonism, February
24–28, pp. 125-126.
- 36. Dwivedi S. B.** (2009): Mesoproterozoic granulites of the Sonapahar,Meghalaya. National
Symposium
March 17-19, Department of Geology,BHU pp 19-20

- 37.. **Dwivedi,S.B.** (2006): Empirically derived non-ideal Margules parameters for garnet and biotite and its application as thermometers. National seminar on “ Origin and evolution of the deep Continental crust” Department of Geology, Pune University 13-14 Oct.2006 P. 34
38. **Dwivedi,S.B.** (2006) : A refined recalibration of Mg-Fe exchange for garnet-biotite geothermometer. Natinal Seminar on Active and Fossil Suture Zones and Annual Gneral Meeting of The Geological Society of India, Wadia Institute of Himalayan Geology Dehradun
39. Kuster,D.,**Dwivedi,S.B.**,Kurkura,K., and Mehari,K. (2004): Petrogenetic reconnaissance exploration for magmatic sulphide mineralisation (Ni-Cu-PGE) of flood basalt related mafic sills, Mekelle area, northern Ethiopia. **20th colloquim of African Geology-Orleans, France-2-7 June 2004, Abstract volume P.245** <http://cag20.brgm.fr>
40. .Kuster,D., **Dwivedi,S.B.**, Kurkura,K., and Mehari,K. (2003): Exploring the Ni-Cu-PGE potential of the Ethiopian flood basalt province: implications from chalcophile element depletion in mafic sills of the Mekelle basi(Tigrai).**4th EGMA congress, Addis Ababa, Ethiopia pp. 44-45**
- 41.. **Dwivedi,S.B.**(2003): Metamorphites hosted base/transition metal of the area around Negas, Tigrai Province, Northern Ethiopia. **4th EGMA congress, Addis Ababa, Ethiopia pp. 46-47**
42. Kuster,D., **Dwivedi,S.B.**, Kurkura,K., and Mehari,K. (2002): Petrograophic and geochemical reconnaissance study of doleritic sills from the Mekelle sedimentary basin, Tigray. IAG Symposium proceedings Addis ababa (Ethiopia) p.72
43. **Dwivedi,S.B.**(1997) Evolution of granulites of the area around Daltonganj,western Chhotanagpur,Bihar. National Seminar "Precambrian 97" Udaipur p.5
- 44.. **Dwivedi,S.B.** (1996): Fug.bas: A computer program for calculation of fugacity of water and carbon dioxide (f_{H_2O} & f_{CO_2}) at desired pressure and temperature. National Symposium on Recent Researches in Sedimentary Basins and XIII convention of IAS,pp. B6.4-B6.6.
45. **Dwivedi,S.B.**(1995): Pressure-Temperaturetime path,oxygen fugacity and water activity during metamorphism of granulites from Daltonganj,Bihar, India. International Conference "Precambrian 95" Montreal, Canada. pp. 231-232.
- 46.. **Dwivedi,S.B.** and Singh T.N.,(1995): P-T conditions of Precambrian metamorphites hosted Lead-Zinc deposits of Rampura-Agucha, Rajasthan,India. International Conference "Precambrian 95" Montreal, Canada p.234.
47. **Dwivedi,S.B.**(1995): Proterozoic retrograde granulites to amphibolite facies transition in the metabasics of the area south-west of Daltonganj,district Palamau,Bihar. Xth Indian Geological Congress,Dhanbad p.21.

- 48.. **Dwivedi,S.B.**(1992): Precambrian metamorphites of the area around Kandra,district Singhbhum,Bihar. Proc.79th Session of ISCA p.11.

Edited Volume

- 49. Dwivedi et al. (2011) : Proceeding of RACE 2011 700p.**

Computer program developed

- 50.**Dwivedi S.B.**,Sivaraman,T.V and Lal R.K.(1995): Ptcalc- A program in QBASIC for pressure-temperature (P-T) calculation.

- 51.Dwivedi,S.B. and Lal,R.K. (1998): GEOTHERMOCALC: Geothermobarometry for high grade Mg-Al rich rocks in the MAS system