Curriculum Vitae of Dr. S.K. Bhattacharya

1. Full Name: **SOURENDRA KUMAR BHATTACHARYA**

2. Date of Birth: **4 January, 1948**

3. Place of Birth: **Calcutta, West Bengal, India**

4. Office Address:

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5. Educational Records:

Qualification	Name of the Institution	Year	Class	(Rank)
School Final	Board of Secondary Education West Bengal	1964	First	First
Pre-University	Calcutta University	1965	First	First
B.Sc.(Physics Honours)	Calcutta University	1968	First	
M.Sc. (Physics)	Calcutta University	1970	First	Third
Advanced Graduate Course	Tata Institute of Fundamental Research	1973	A-Grade	
Ph.D.(Physics)	Physical Research Laboratory (Gujarat University)	1979		

6. Research Appointments:

Visiting Member at Tata Institute of Fundamental Research, Bombay (1971-73).Mombusho Scholar (Govt. of Japan) in Tokyo University (1976-77). Co-investigator in Lunar Sample Analysis proposal with NASA (1973-79). Research Associate in Physical Research Laboratory (1973-81). Indian National Science Academy - Japan Society for Promotion of Science Exchange Fellowship in Japan (1982) for six months. Fellow in Physical Research Laboratory (1981-88). Visiting Research Associate in University of California, San Diego, U.S.A. (1987-89). Associate Professor at PRL (1988); Visiting Scientist At CSIRO, Melbourne, Australia (April-September, 1996);Visiting Professor at Tokyo Metropolitan University (1997);Visiting Research Scientist at University of California, San Diego, U.S.A. (February- July, 1998).
Special Consultant at International Atomic Energy Agency, Vienna, August-December, 2002.
Professor at Physical Research Laboratory (August, 1996- July, 2003);
Senior Professor at P.R.L. (August, 2004- January, 2008).

Visiting Professor at Laboratory of Glaciology, Geophysics and Environment (LGGE), Grenoble, France under IFCPAR Exchange Program, June, 2005.
CNRS Visiting Professor at LGGE July- October, 2007.
Lady Davis Visiting Professor to Hebrew University of Israel, November- December, 2007.
Visiting Professor at Purdue University, Indiana from June to December, 2008.
Visiting Professor at Ocean Research Institute, Tokyo University from January–March, 2009.
Visiting Professor at Academia Sinica, Taiwan, April, 2009 to March, 2013.
Visiting Professor at Purdue University, Indiana from October, 2009 to March, 2010.
CNRS Visiting Scientist at LGGE Laboratory in Grenoble, France, June, 2010 - January, 2011.
Visiting Professor at LGGE, Grenoble, June- August, 2013
Visiting Research Fellow at Academia Sinica, Taiwan, from October, 2013 to March 2016.
Visiting Scientist at Indian Institute of Science, Bangalore, India during 2015 and 2016 for several months.
Visiting Research Fellow at Academia Sinica, Taiwan, from October 2017 to March 2018.
International Visiting Professor, IIT, Kharagpur- November 2018 to November 2021.

7. Present activities

Collaboration with scientists of IISC, IISER, IITKGP and Academia Sinica to do research on isotope Geochemistry. Triple isotope systematics of Oxygen in chemical sediments to understand ancient ocean conditions.

8. Past experience:

Cosmic ray effects in Moon and Meteorites; Low activity radiation counting techniques; Neutron activation analysis and radiochemistry.

9. Present areas of interest:

Stable Isotope Geochemistry; Palaeo-climatology; Isotope ratio mass spectrometry; Anomalous isotopic fractionation in photochemical reactions and dissociations. Application of isotopes in environment and ecology.

10. Academic Activities:

Past guide of eight Ph.D. students who did research on various subjects in Stable isotope geochemistry. Teacher of Graduate students in PRL. Principal Investigator of IAEA sponsored co-ordinated Research Project on Trace gases (1992-1999). Past Chairman of Academic Committee, (PRL). Past Editor of "Science Focus" (PRL in-house journal). Chairman of Library Committee. Advisor on several IAEA isotope based programs. Presently guiding two students for Ph.D. in stable isotope based studies. Principal Investigator of IAEA sponsored co-ordinated Research Project on Isotope Tracing in large River basins (2002-2005). Associate Dean at Physical Research Laboratory, 2003. Dean at PRL from February 2004 to January 2007. Retired from PRL as Senior Professor and Dean on January 2008. Presently, Visiting Professor In Academia Sinica and IIT Kharagpur.

11. Fellowship:

Fellow of the National Academy of Sciences, Allahabad. Fellow of Geological Society of India. Fellow of the Indian Academy of Sciences, Bangalore. Member of IGCP-303 on Pre-Cambrian/Cambrian Boundary Events. Member of Indian Society of Mass-Spectrometry. Member of National Coordination Committee on Isotope Hydrology. Member of the Selection Committee of Fellows in Earth Sciences for the Indian Academy.

Contact Numbers of Prof. S.K. Bhattacharya

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List of publications of Prof. S.K. Bhattacharya (Total 153+7)

1. Cosmic ray effects induced in a rock exposed on the moon or in free space : Contrast in patterns for tracks and isotopes.
S.K. Bhattacharya, J.N. Goswami, S.K. Gupta and D. Lal.
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2. Semi-empirical rates of formation of cosmic ray tracks in spherical objects exposed in space : Pre and Post-Atmospheric depth profiles.
S.K. Bhattacharya, J.N. Goswami and D.Lal. J. Geophys. Res.,78, pp. 8356-8363, 1973.

3. Effects of exposure conditions of cosmic ray records in lunar rocks.
S.K. Bhattacharya and N. Bhandari.
Proc. Lunar Sci. Conf. 6th, pp. 1901-1912, 1975.

4. The surface radioactivity of lunar rocks: implications to the solar activity in the past.
N. Bhandari, **S.K. Bhattacharya** and J.T. Padia.
Proc. Lunar Sci. Conf. 6th, pp. 1913-1925, 1975.

5. Lunar regolith and gas-rich meteorites :
Characterization based on particle tracks and grain-size distributions.
S.K. Bhattacharya, J.N. Goswami, P.P. Patel and M.N. Rao.
Proc. Lunar Sci. Conf. 6th, pp. 3509-3526, 1975.

6. Solar proton fluxes during the last million years.
N. Bhandari, **S.K. Bhattacharya** and J.T. Padia.
Proc. Lunar Sci. Conf. 7th, pp. 513-523, 1976.

7. Variation of cosmogenic radioactivity in Dhajala fragments.
N. Bhandari, **S.K. Bhattacharya**, S. Krishnaswami and B.L.K. Somayajulu
Meteoritics, 11, pp. 250, 1976.

8. Modulation of galactic cosmic rays from the study of cosmogenic radioisotopes in meteorites.
S.K. Bhattacharya and N. Bhandari**..**
Proc. Symp. Solar and Planetary Phys. Vol. 2, pp 161-169, 1976.

9. Cosmogenic isotopes in the Dhajala chondrite:Implications to variation of cosmic ray fluxes in the interplanetary space.
N. Bhandari, **S.K. Bhattacharya** and B.L.K. Somayajulu.
Earth Planet. Sci. Lett.40, pp. 194-202, 1978.

10. Ground water models for interpretation of silicon-32 and radiocarbon data.
S.K. Bhattacharya,S.K.Gupta,R. Hart, D.Lal and V.N. Nijampurkar.
In Current Trends in Arid Zone Hydrology, Proc. of a symposium held at Ahmedabad in 1978 (Eds.S.K. Gupta and P.Sharma) pp.137-147, 1978.

11. Depth and size dependence of ^{53}Mn activity in chondrites.
S.K. Bhattacharya, M. Imamura, N. Sinha and N. Bhandari.
Meteoritics, 14, pp. 345-347, 1979

12. Production profile of cosmogenic ^{53}Mn in the Marjalahti Pallasite.
S.K. Bhattacharya, N. Bhandari and V.P. Perelygin.
J. Geophys. Res., 85, pp. 1439-1442, 1980.

13. Depth and size dependence of ^{53}Mn activity in chondrities.
S.K. Bhattacharya, M. Imamura, N. Sinha and N. Bhandari. Earth and Planet. Sci. Lett., 51, pp. 45-57, 1980.

14. A bakable glass pirani gauge for monitoring low vacuum.
S.K. Bhattacharya and K. Gopalan.
P.R.L. Technical Note, TN-81-06, 1981.

15. ^{10}Be in deep sea sediments and cosmic ray intensity variations.
P. Sharma, B.L.K. Somayajulu and **S.K. Bhattacharya**.
Proc.18th International Cosmic Ray Conf.,Bangalore,2,337 (1983).

16. Isotopic and related studies of antarctic ice samples.
N.Bhandari, **S.K. Bhattacharya**,V.N.Nijampurkar,D.Sengupta,V.G. Shah, A.K. Singhvi, P.N. Shukla, K.M.Suthar and C.P. Vora.
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17. Stable carbon isotope ratios of palaeosols from Kashmir and their palaeoecological implications.
R.V Krishnamurthy, **S.K. Bhattacharya**, R.K. Pant and M.J. DeNiro.
in Current Trends in Geology, Vol.VI, pp. 147-150, (Eds. D.P. Agrawal, Sheela Kusumgar and R.V. Krishnamurthy), 1985.

18. Geochemical studies of the river-estuarine systems of Krishna and Godavari.
M.M.Sarin, K.S. Rao, **S.K. Bhattacharya**, R. Ramesh and B.L.K. Somayajulu.
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19. Oxygen and hydrogen isotopic ratios in groundwaters and river waters from India.
S.K. Bhattacharya, S.K.Gupta and R.V. Krishnamurthy.
Proc.Ind. Acad. Sci. (Earth and Planet. Sci.), Vol.94, pp. 283-295, 1985.

20. Origin of hot spring water in Gujarat from oxygen isotope studies
S.K. Bhattacharya
Mineral Wealth, Vol.XXI, pp. 31-35, 1985.

21. Isotope coherence in trees from Kashmir Valley,India and its implications to Dendroclimatology.
R. Ramesh, **S.K. Bhattacharya** and K. Gopalan.
Nature, Vol.317, pp. 802-804, 1985.

22. Climatic correlations in the stable isotope records of silver fir (Abies pindrow) trees from Kashmir India.
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26. Palaeoclimatic changes deduced from $\delta^{13}C$ and C/N of Karewa lake sediments, India.
R.V.Krishnamurthy, **S.K. Bhattacharya** and Sheela Kusumgar. Nature, Vol.323, pp. 150-152, 1986.

27. Carbon isotopic evidence for different feeding patterns in an Asian elephant population.
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Current Science, 56, pp. 11-14, 1987.

28. Source of seepage in Sudamdih mine area, Bihar, India using environmental isotopes.
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29. Climatic significance of variations in the width and stable isotope ratios of tree rings.
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Proc. Conf. on Sci. Techniques to Archaeology, Ed. E.A. Slater and J.O. Tate, pp. 591-609, 1988.

30. Isotopic fractionation in ozone decomposition.
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40. Oxygen isotope evidence for a stronger winter monsoon Current during the last glaciation.
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41. Effect of sample pre-treatment and size fraction on $\delta^{18}0$ and $\delta^{13}C$ values of foraminiferas from Arabian sea sediments.
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42. Stable oxygen and hydrogen isotope ratio in shallow ground waters from India and a study of the role of evapotranspiration in the Indian Monsoon.
R.V. Krishnamurthy and **S.K. Bhattacharya**.
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43. Stable isotope analyses of dinosaur eggshells : Paleoenvironmental implications.
A.Sarkar, **S.K. Bhattacharya** and D.M.Mohabey
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44. Carbonatites from Rajasthan indicate mantle carbon and oxygen isotopic composition A.Sarkar and **S.K. Bhattacharya**
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45. Monsoon effect on isotopic composition of atmospheric carbon dioxide
S.K. Bhattacharya and R.A. Jani
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46. Glacial to interglacial isotopic changes in planktonic and benthic foraminifera from the western Arabian Sea.
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A.Sarkar, **S.K. Bhattacharya**, P.N.Shukla, N. Bhandari and D.P.Naidin
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49. Study of groundwater occurrence and mixing in Pushkar (Ajmer) Valley, Rajasthan with $\delta^{18}0$ and hydrochemical data.
P.S.Datta, **S.K. Bhattacharya**, P.Mookerjee and S.K.Tyagi.
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50. Assessment of groundwater flow conditions and hydrodynamic zones in phreatic aqufer of Delhi area using oxygen-18.
P.S.Datta, **S.K. Bhattacharya** and S.K.Tyagi
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51. Biphasic enrichment of $H_2{}^{18}O$ in developing wheat grain water.
P.C. Pande, P.S.Datta and **S.K. Bhattacharya**
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P.C.Pande, P.S.Datta, **S.K. Bhattacharya** and S.K. Tyagi
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53. Vegetative growth and ecophysiological significance of ^{13}C and ^{18}O composition of air-CO_2.
P.S. Datta, **S.K. Bhattcharya**, S.K. Tyagi and RCA Jani
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54. $\delta^{18}O$ and δD systematics in the surficial waters of Gaula river catchment area, Kumaon Himalaya, India
S.K. Bartarya, **S. K. Bhattacharya**, R.Ramesh and B.L.K. Somayajulu
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55. Palaeoclimate and Palaeovegetation in Central India during the Upp.er Cretaceous based on the stable isotope composition of the palaeosol carbonates.
P. Ghosh, **S.K. Bhattacharya** and R.A. Jani
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P.S. Datta, **S.K. Bhattacharya** and S.K. Tyagi
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58. Dissolution Seams : Some observations from the proterozoic chanda Limestone, Adilabad, India
Pradip K. Bose, Subir Sarkar and **S.K. Bhattacharya**
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S.K. Bhattacharya, R.A. Jani, S.C. Tripathy and T.C. Lahiri
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83 Isotopic analysis of Permo-Carboniferous Talchir sediments from East-Central India: signature of glacial melt-water lakes
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