Brief Bio-data

1. Name: Bodhisatwa Hazra

2. Date of Birth: 21.08.1986

3. Current Position and Address (Include Email ID and Contact Number)

Scientist, Rock Mechanics Laboratory, FE-SEM & Rock-Eval Laboratory;
bodhisatwa.hazra@gmail.com; +91-8900718631

4. Educational qualifications: (Graduation and above)

Sl. No.	Degree	Year of Passing	University/Institute	Subject
1.	B. Sc (H)	2008	Burdwan University	Geology (hons.)
2.	M. Sc.	2010	Burdwan University	Geology
3.	PhD	2015	Indian School of Mines, Dhanbad	Applied Geology, Coal Geology, Petroleum Geochemistry

5. Work experience:

Designation	Institute/company	From	To	Nature of Work
Postdoctoral Fellow	Indian Institute of Technology Bombay	29.01.2016	03.08.2016	Reseach
DST Inspire Faculty (Asst. Prof. Tenure Track)	Indian Institute of Technology Kharagpur	05.08.2016	10.011.2017	Teaching, Research
Scientist	CSIR-Central Institute of Mining and Fuel Research, Dhanbad	15.11.2017	continuing	Research, Teaching

6. Work Area(s)/ Specialization: Petroleum Geochemistry, Coal Geology, Rock Physics

7. Major contributions: (Max. 100 words):

- Guidelines for assessing hydrocarbon-generation potential of coals and shales
- Establishment of new thermal maturity proxy for shales
- Using Rock-Eval S2 graphics for predicting end-usage of coals
- Ensuring supply of better coal to thermal power plants
- Increasing the publication output of CIMFR, and thereby the country
- Utilization and value-added application of coal combustion residues (waste-to-wealth)
- Establishment of analytical facility for mapping new hydrocarbon reservoirs
- Evaluation of rock mechanical properties for helping the industry for optimal design of their rock engineering projects with due safety and efficiency.

8. No. of Research Publications:

- Papers in Journals: 34
- In conference proceedings: 15
- Invited lectures delivered: 02
- List of best 05 publications

i) **Hazra, B.**, Varma, A.K., Bandopadhyay, A.K., Mendhe, V.A., Singh, B.D., Saxena, V.K., Samad, S.K. and Mishra, D.K., 2015. Petrographic insights of organic matter conversion of Raniganj basin shales, India. *International Journal of Coal Geology*, *150*, pp.193-209.

ii) **Hazra, B.**, Wood, D.A., Vishal, V., Varma, A.K., Sakha, D. and Singh, A.K., 2018. Porosity controls and fractal disposition of organic-rich Permian shales using low-pressure adsorption techniques. *Fuel*, *220*, pp.837-848.

iii) **Hazra, B.**, Wood, D.A., Vishal, V. and Singh, A.K., 2018. Pore characteristics of distinct thermally mature shales: influence of particle size on low-pressure CO_2 and N_2 adsorption. *Energy & Fuels*, *32*(8), pp.8175-8186.

iv) **Hazra, B.**, Dutta, S. and Kumar, S., 2017. TOC calculation of organic matter rich sediments using Rock-Eval pyrolysis: Critical consideration and insights. *International Journal of Coal Geology*, *169*, pp.106-115.

v) **Hazra, B.**, Singh, D.P., Chakraborty, P., Singh, P.K., Sahu, S.G. and Adak, A.K., 2021. Using rock-eval S4Tpeak as thermal maturity proxy for shales. *Marine and petroleum Geology*, *127*, p.104977.

- Books/Chapters authored/edited: 02 books

i) **Hazra, B.**, Wood, D.A., Mani, D., Singh, P.K. and Singh, A.K., 2019. *Evaluation of shale source rocks and reservoirs*. Springer.

ii) Singh, A.K., Masto, R.E., **Hazra, B.**, Esterle, J. and Singh, P.K., 2020. *Ash from Coal and Biomass Combustion*. Springer International Publishing.

9. List of 5 Major Contract R&D Projects:

i) Scientific study on quality monitoring of coal (Loading point- Pandaveswar, SonpurBazari, Salanpur, Mugma & Rajmahal OCP) for NTPC Farakka, Phase-II

ii) Scientific study on quality monitoring of coal at Unloading point of NTPC Rihand, Rihandnagar, U.P., Phase-VIII.

iii) Scientific study on quality monitoring of coal (Loading point of different areas of NCL) for Anpara Thermal Power Station, Phase-VIII

iv) Exploring the Possibility of Segregation of Sand from Different Overburden (OB) for Its Use in Civil Construction Works (Captive/Commercial)

v) Study to estimate Geo-technical properties of BH# CMITS-12 for mine design and coal exploration of Itapara South Block, Raniganj coalfield

10. (a) Name of Patents/Copyrights applied /granted/commercialized: NIL

(b) Technologies/Products /knowhow/Services developed: NIL

11. Honors/Awards/recognitions/fellowships/scholarships/Professional Memberships received:

i) **CSIR- Young Scientist Award 2019** in the field of Earth, Atmosphere, Ocean and Planetary Sciences

ii) **DST-INSA Inspire Faculty award, 2015** in the field of Earth & Atmospheric Sciences

iii) **Dr. K. N. Sinha Award for the highest impact factor (IF)** of papers published in SCI journals by scientific staff members of CSIR-CIMFR in the year **2017-18**

iv) **Dr. K. N. Sinha Award for the second-highest Impact factor (IF)** of papers published in SCI journals by scientific staff members of CSIR-CIMFR in the year **2018-19**

v) Associate Editor at the Arabian Journal of Geosciences (SCI journal published by Springer

12. Societal Contributions:

i) Involved in the coal quality monitoring work at different load and unloading ends, that has helped in improving the quality of coal being supplied to thermal power plants, and thereby leading to reduced emissions and cheaper electricity.

ii) Involved in analysis of the behaviour of borehole core rock samples specifically required for planning, design and construction of mining and civil engineering projects.

ii) Very recently, the undersigned along with his colleagues, explored the possibilities of exploring sand from coal overburden rocks. Extraction of sand from waste rocks represents waste-to-wealth.