

1. Name: Jaywardhan Kumar

2. Date of Birth: 15.09.1987

3. Current Position and Address:  
(with E-mail & Phone no.)

Scientist  
Nonconventional Gases Section,  
CSIR-Central Institute of Mining and Fuel Research,  
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4. Educational qualifications: (Graduation and above):

Sl. No	Degree/Certificate	Year of Passing	University/Institute	Subjects
1.	B.Tech.(Chemical Engg)	2011	B.I.T Sindri	Heat Transfer, Mass Transfer
2.	M.Tech (Mine Safety Engg.)	2014	AcSIR	Mine Safety Engineering

5. Work experience:

After graduating with B.Tech in Chemical Engineering from B.I.T Sindri in 2011, I joined Aditya Birla Chemicals where I was involved in the commissioning and operation of one of the complex chemical plants in India. In 2012, I got an opportunity to work as a Trainee Scientist in CSIR-Central Institute of Mining and Fuel Research (CIMFR), Dhanbad. I was also enrolled for integrated Mtech-PhD programme offered by Academy of Scientific and Innovative Research (AcSIR) at CSIR-CIMFR, Dhanbad. As a Trainee Scientist in CSIR-Central institute of Mining and Fuel Research, I learned all the aspects of coal mining and handling activities and also non-conventional energy sources like coalbed methane (CBM), coal mine methane (CMM) and underground coal gasification (UCG). I got an involvement in the projects like carbon foot printing of coal mines, preparation of greenhouse emission data from coal mining and handling activities in India. Reducing and utilizing CH<sub>4</sub> emission from coal mining and handling activities in India. On 11<sup>th</sup> April 2016, I started working as Scientist in CSIR-CIMFR, Dhanbad . Details of different working posts/positions are given below in the table:

Designation	Institution/company	From	To	Nature of work
Graduate Engineer Trainee (GET)	Aditya Birla Chemicals	June, 2011	June, 2012	Process Engineer
Engineer	Aditya Birla Chemicals	June, 2012	Sept, 2012	-do-
Trainee Scientist	CSIR-CIMFR	Sept, 2012	March, 2016	R&D
Scientist	CSIR-CIMFR	April, 2016	Till date	-do-

6. Area of specialization: Coalbed Methane, Carbon-foot printing, Carbon Capture and Sequestration, GHG Inventorization.

7. Honours/Awards received: Nil

8. Fellowships/Scholarships: Nil

9. No. of Research Publications: Total = 05

- Papers in journals: One (Indian Journal of Environmental Protection)
- In conference proceedings: Four (Three in international Conferences)
- Invited/key-note addresses: Nil

• List of best 05 publications:

1. **Kumar, J.,** Singh A.K., 2016. Evaluation of Carbon Capture Potential from Thermal Power Plants and its Storage in Geological Formations in India. 6<sup>th</sup> Asian Mining Congress and Exhibition. 23-27 February 2016. Kolkata, India.
2. Singh, A.K., **Kumar, J.,** Garg, A. 2015. Fugitive Methane Emissions from Indian Coal Mining And Handling Activities: Estimates and Opportunities for its Utilization to Generate Clean Energy. International Scientific Conference on Our Common Climate Future Change. 07<sup>th</sup> -10<sup>th</sup> July. Paris. France.
3. **Kumar, J.,** Singh, A.K., 2015. Quantification of Fugitive Methane Emission from Coal Mining and Handling Activities for Recent Years in India. Indian Journal of Environmental Protection. Volume 35. pp.47-52.
4. Singh, A.K., **Kumar, J.,** 2015. Fugitive Methane Emissions from Indian Coal Mining and Handling Activities: Estimates, Mitigation and Opportunities for its Utilization to Generate Clean Energy. 5<sup>th</sup> International Conference on Advances in Energy Research. 15-17<sup>th</sup> December IIT Bombay.
5. Singh, A.K., **Kumar, J.,** 2013. Coal Mine Methane Resource Assessment in Eastern Coalfields in India. National Conference on Sedimentation and Tectonics with Special reference to Energy Resources of North East India. Manipur University. Imphal. pp.50-60.

10. Number of Books authored/edited: Nil

11. (a) No. of Patents granted/applied for: Nil

(b) Technologies developed, Licensed and/or commercialized: Nil

12. Foreign visits: Nil

13. Details of Professional memberships: Nil

14 . Major contributions: ( Max.150 words)

I was working in the area of coal bed methane, carbon capture and sequestration, coal mine methane etc. I have contributed in the projects which have national and international reputation. I have contributed towards India's 1<sup>st</sup> Carbon Foot printing of a coal mine. My engagement was in NATCOM project of Government of India to meet an international obligation to supply GHG data to United Nations Framework Convention on Climate Change (UNFCCC). I have quantified data on fugitive methane emissions from coal mining and handling activities and oil and natural gas systems in India. These estimates have been reported in India 1<sup>st</sup> Biennial update report to UNFCCC.

15. Technologies and Products/ Services

- (i) Developed: Nil
- (ii) Licensed: Nil
- (iii) Commercialized: Nil

16. Designs and Prototype Developed: Nil

17. Honours and awards won for technological contributions or sociological impact of R&D: Nil

Signature