



1. Name: DR. RAN VIJAY KUMAR SINGH

2. Date of Birth: 05.01.1963 (Fifth January Nineteen Sixty three)

3. Current Position and Address: Chief Scientist
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CSIR-Central Institute of Mining & Fuel Research,
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4. Educational qualifications: (Graduation and above)

Sl. No.	Degree/ Certificate	Year of Passing	University/ Institute	Subjects
I	B. Sc. (Hons.)	1981	Magadh University, Bodh-Gaya	Chem. (Hons.), Bot., Zool.
II	M.Sc.	1984	Gorakhpur University Gorakhpur	Chemistry (Organic)
III	Ph. D.	1987	Magadh University Bodh-Gaya	Chemistry

5. Work experience

Designation	Institution/company	From	To	Nature of work
Scientist Gr. IV(1)	CSIR-CIMFR, Dhanbad	31.10.1989	30.10.1994	R&D Work
Scientist Gr. IV(2)	CSIR-CIMFR, Dhanbad	31.10.1994	30.10.1999	R&D Work
Scientist Gr. IV(3)	CSIR-CIMFR, Dhanbad	31.10.1999	30.10.2003	R&D Work
Scientist Gr. IV(4)	CSIR-CIMFR, Dhanbad	31.10.2003	30.10.2008	R&D Work
Senior Principal Scientist	CSIR-CIMFR, Dhanbad	31.10.2008	30.10.2013	R&D Work
Chief Scientist	CSIR-CIMFR, Dhanbad	31.10.2013	Continuing	R&D Work

6. Area of specialization:

Research & Development (S&T Grant) Projects, R&D work on Mine safety of natural resource and environment, development of different chemical based products/Technology for prevention and control of mine fire and spontaneous heating for the benefit of coal Mining Industries, Network, Sponsored and Advisory Project work

7. Honors/Awards received:

Awards

- **National Mineral Award 2006** in the field of Mining Technology from **Ministry of Mines, Govt. of India**
- **NRDC Technology Day Invention Award 1999** by a Government of India Enterprise, **Ministry of Science & Technology, Govt. of India**
- **Bharat Jyoti Award -2011**

- **CSIR Technology Award – 2011** presented to CSIR-CIMFR Team for Developing Technology for extraction design of locked-up coal by High wall Mining in India in “Physical Sciences and Engineering”
- **Award of Raman Research Fellowship 2001** from CSIR, New Delhi, **Ministry of Science & Technology, Govt. of India**
- **CSIR Golden Jubilee CMRI Whitaker Annual Award 1995-96**
- **MGMI Bronze Medal 1997- 1998 from Mining Geological & Metallurgical Institute of India, Calcutta**

8. Fellowships/Scholarships:

- **Received National Merit Scholarship from 1977 to 1983**
- **CSIR JRF/SRF Fellowship from 1985 to 1988**
- **Received Raman Research Fellowship 2001**

9. No. of Research Publications:

- Papers in journals: 43
- In conference proceedings: 92
- Invited/key-note addresses: 31
- List of best 05 publications:

Sl. No.	Name of the authors	Title of the paper	Name of the Journal, Volume, year and page
1.	<u>R. V. K. SINGH</u>	Spontaneous Heating and Fires in coal mines	Procedia Engineering, 62 (2013), 78-90 ELSEVIER, www.sciencedirect.com
2.	<u>R. V. K. Singh</u>	Chemical inhibitors – challenging approach for control and combating spontaneous fire in coal mines	Journal Chemtracks, 14(2), 2012, P. 485-492.(ISSN: 0973-239X)
3.	<u>R.V.K.Singh</u> and S.C.Banerjee	Using inhibitors for preventing spontaneous fires in mines	Colliery Guardian, London (U.K.), July 1993, P. 145-147
4.	<u>R. V. K. Singh</u> , G. Sura and V. K. Singh	Safety management of open pit coal mines from occurrences of spontaneous heating/fire – case studies	Australasian Institute of Mining and Metallurgy Journal Publication Series, 2007, pp. 139-143
5.	A. K. Singh, <u>R. V. K. Singh</u> , M. P. Singh, Hemchandra and N. K. Shukla	Mine Fire indices and their application to Indian underground coal mine fires	International Journal of Coal Geology, Vol. 69, Issue 3, 1 February 2007, P. 192-204, ELSEVIER, www.sciencedirect.com

10. Number of Books authored/edited:

11. (a) No. of Patents granted/applied for: 01

(b) Technologies developed, Licensed and/or commercialized:01

12. Foreign visits: Russia, Ukraine, South Africa, Iran, Turkey and China

13. Details of Professional memberships:

(a) Fellow, Indian chemical Society,

(b) Associate member, Institution of Chemists (India),

(c) Member, Mining, Geological & Metallurgical Institute of India

(d) Life Member, Indian Science Congress Association and

(e) Life member, Journal Chemtrack

(f) Life Member, Vigyan Bharati

14 . Major contributions: (Max. 150 words)

Fire in coal mining sector is a National problem and directly related to the Safety of human lives and loss of natural resource. Environment is directly polluted due to release of noxious gases in atmosphere due to fire. In New Kenda mine fire disaster, 54 miners lost their lives due to fire. I have carried out R&D work for development of Fire Protective Coating, mechanized spraying device, additives, comprehensive technology for prevention and control of fire in blasting gallery panels in underground and surface coal mines. I am also involved alongwith our team for implementation of suitable site specific different technology for control and combating fire in coal mines since 1989. After control of fire, pollution is being minimized to save the environment and life of the people may be safe who are living near by the coal mining Sector. Surface structures like houses, railway lines, roads, jorebed, nallas, mining equipments as well as human lives have been protected from fire in coal mines. This is my contribution to our Country. Presently I am working as Task leader of the project approved by NITI Aayog (Planning Commission), Govt. of India under 12th Five year plan of "Clean Coal technology" besides the Advisory projects.

15. Technologies and Products/ Services

(i) Developed: 02

(ii) Licensed:01

(iii) Commercialized: 02

16. Designs and Prototype Developed:

A mechanised device for spraying CIMFR developed fire protective coating material in the coal benches of opencast mines was developed by M/s Signum Fire Protection (India) Pvt. Ltd., Nagpur in collaboration with CIMFR under S&T project funded by Ministry of Coal, Govt. of India. The most important feature of the system is that it can throw the fire protective material up to a height 20m. Its other plus points are: simple in operation, easy in mobility and capable of coating a large surface area in a very short time. This newly devised spraying system would be highly useful for preventing spontaneous combustion/fire in

freshly exposed coal benches in opencast mines, coal stocks, and out by sides of the developed galleries worked by opencast method and in goaf of extracted underground blasting gallery. After successful laboratory experiments, it was put to rigorous field trial at Jhingurdah opencast mine, Singrauli of Northern Coalfields Limited (NCL) and BG panel of SCCL mines.

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

I received National Awards for development of different technology, which is recognized by NRDC Technology Day Invention Award, National Mineral Award, Raman Fellowship Award, Bharat Jyoti Award and CSIR Golden Jubilee CMRI-Whitaker Award and MGMI Medals for development of different technology for prevention and control of fire in coal mines as per the need of mining Industries. Our national resource like valuable coal has been saved from fire and environmental pollution also reduced after application of the suitable Technology,