



1. Name: **Gautam Kumar Bayen**

2. Date of Birth: 23-07-1969

3. Current Position and Address

(with E-mail & Phone no.): Scientist, Gr.IV(3),
CSIR-CIMFR,
Coal Carbonization Division,
Dhanbad, Jharkhand.
Email ID: gkbayen@rediffmail.com
Mobile no. 9709719400 / 9471191811

4. Educational qualifications: (Graduation and above)

SI. No.	Degree/ Certificate	Year of Passing	University/ Institute	Subjects
1.	B.Sc.	1992	Calcutta University	Physics, Chemistry, Maths.
2.	B.E (Chemical)	1997	Jadavpur University	Chemical Engineering
3.	M.E (Chemical)	2002	Jadavpur University	Chemical Engineering

5. Work experience

SI. No.	Designation	Institution/compan y	From	To	Nature of work
1	<u>Chemical & Metallurgical Assistant</u>	<u>Southern Railway</u>	<u>August 2002</u> <u>07/02/2005</u>	January 2005	<u>Quality control and laboratory analysis of various material used in railway Engine</u>
2	<u>Scientist, Gr.IV(1)</u>	<u>CSIR-CIMFR</u>		06/02/2009	<u>R&D on coal carbonization</u>
3	<u>Scientist, Gr.IV(2)</u>	<u>CSIR-CIMFR</u>	<u>07/02/2009</u>	06/02/2013	<u>R&D on coal carbonization</u>
4	<u>Scientist, Gr.IV(3)</u>	<u>CSIR-CIMFR</u>	<u>07/02/2013</u>	Still now	<u>R&D on coal carbonization</u>

a. Area of specialization: Coal Carbonization, Briquetting and Design of non-recovery type coke oven

b. Honors/Awards received: Nil

c. Fellowships/Scholarships: Nil

d. No. of Research Publications:

- Papers in journals: 0
- In conference proceedings: 7
- Invited/key-note addresses: 0
- List of best 05 publications:

- 1) A study on effect of temperature and carbonization time on the properties of rice husk char: by G.K.Bayen, KMP Singh, G Udaybhanu, Sumanta Let, Shalini Pandey: International seminar on Innovation in Mineral Processing, organized by Tata Consultancy Services on 5-7th January 2016
- 2) A brief study on the effect of HF treatment on rice husk chars properties: by G.K.Bayen, KMP Singh,

G Udaybhanu, Sumanta Let, Shalini Pandey: International seminar on Innovation in Mineral Processing, organized by Tata Consultancy Services on 5-7th January 2016

- 3) Carbonization technique for Improvement of Coke quality: by G.K.Bayen, R.S.Yadav, Ujjal Bhattacharjee, T.K.Bhattacharjee, T.Pramanik : In the seminar Koyla Udduog: Dristi 2025, organized by CSIR-CIMFR on 5-7th January 2012
- 4) Direct reduction of iron ore using non-coking coal in non-recovery type coke oven: by G.K.Bayen, Rajiv Ranjan, R.S.Yadav, T.Pramanik, Sudip Maity, S.Mukharjee, S.K.Dey, G.K.Gupta: In the seminar Koyla Udduog : Dristi 2025, organized by CSIR-CIMFR on 5-7th January 2012
- 5) Evaluating the efficiency of the process of increasing the bulk density of a coal charge for improving coke quality utilizing inferior grade / less matured coal: by G.K.Bayen, S.K.Hazra, A.Bhattachaaya, R.S.Yadav, Ujjal Bhattacharjee, T.K.Bhattacharjee,R.K.Choudhuri : In the seminar Coking Coal for Coke Making – Challenges and Opportunities , organized by RDCIS, Ranchi on 12-14th December 2005.

10. Number of Books authored/edited: 0

11. (a) No. of Patents granted/applied for: 0

(b) Technologies developed, Licensed and/or commercialized: 0

12. Foreign visits: 0

13.Details of Professional memberships: Nil

14. Major contributions: (Max. 150 words):

- a) R&D on coal carbonization, briquetting and pelletization
- b) Design of stamp-charging machine for pilot scale pusher type coke oven
- c) Design of various type of non-recovery coke oven (like stamp charging, top charging, pusher type, drag type coke oven) both pilot scale study as well as commercial use.
- d) Design of different equipment like primary and secondary cooler, ammonia scrubber, hydraulic main, and pipelines for pilot scale by-product type coke oven plant.
- e) Design of a laboratory scale oven suitable for DRI study in stagnant bed condition, as well as suitable for coke making study
- f) Design for modification pilot scale electrically heated coke oven for making it suitable for DRI study in stagnant bed condition as well as coke making study.
- g) Design the curriculum for coal canonization for ACSIR PhD program. Also prepared lecture notes, tutorials, delivered lecture and guided the student who had chosen coal carbonization as an optional subject for his PhD.

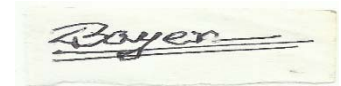
15. Technologies and Products/ Services:

- (i) Developed:
 - a) Development of technique for preparation of metallurgical coke from of low grade coal with other coking coal using stamp-charging technique.
 - b) Development of process / technique for direct reduction of iron ore in stagnant bed condition in non-recovery type coke oven.
 - c) Development of technique for preparation of composite micro pellet from coal and iron ore for direct reduction in stagnant bed condition in non-recovery type coke oven.
- (ii) Licensed: Nil
- (iii) Commercialized:
 - a) Technology for making soft coke using non -recovery type coke oven developed in CSIR-CIMFR.
 - b) Technology for making metallurgical grade coke using non-recovery coke oven (both pusher type and drag type non-recovery coke oven) developed in CSIR-CIMFR.
 - c) Stamp charging technique for making hard coke from low grade coal with coking coal using stamp charging technique developed in CSIR-CIMFR.

16. Designs and Prototype Developed:

- d) Designed a pilot scale non-recovery type coke oven suitable for both top charging and stamp charging.
- e) Designed primary and secondary coolers, ammonia scrubber, hydraulic main, and pipe lines for a by-product type coke oven pilot plant.
- f) Designed a laboratory scale proto type coke oven for using it both for the study of DRI in stagnant bed condition as well as study of coke making.
- g) Designed for modification of 250 kg capacity electrically heated non-recovery type coke oven for using it for DRI study as well as coke making study.

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

A small, rectangular piece of aged, yellowish paper with the word "Bayer" written in a cursive, handwritten style. The signature is dark and appears to be ink or a dark marker.

Signature