Publications

Patent Filed/Published/Granted

(i) **Title:** An integrated fluidized bed reactor system for Ammonia combustion to obtain hydrogen and power and method for the same
Name of Inventors: S. K. Das, A. Samanta, S. Sengupta, S Sen Gupta
Patent No. and Publication Date: 202331017619, 15.03.2023
Status: Granted, Date: 14.06.2024

(ii) **Title:** Dual fluidized bed chemical looping gasification system for Hydrogen production and process of Hydrogen production therein
Name of Inventors: A. Samanta, S.K. Das, S. Sen Gupta
Patent No. and Publication Date: 202331073657, 24 November 2023
Status: Published

(iii) **Title:** A system for ammonia combustion with two stage coupled combustor
Name of Inventors: A. Samanta, S.K. Das, S. Sen Gupta,
Patent No. and Publication Date: 202331078073, 01 December 2023
Status: Published

(iv) **Title:** A process for the production of Hydrogen from Aluminum waste
Name of Inventors: A. Samanta, C. J. Lad, B. Prasad, T.K. Mandal, S.K. Das, S. Sen Gupta
Patent No. and Publication Date:202431005303, 23 February 2024
Status: Published

(v) **Title:** Synthesis method and apparatus for carbon dioxide capture using functionalized fabric cloth
Name of Inventors: A. Samanta, B. Prasad, S.K. Das, S. Sen Gupta
Patent No. and Publication Date: 202431032179, 23 April 2024
Status: Published

Peer-reviewed Journals

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5. A. Agarwal, A. Samanta, B. K.Nandi, A. Mandal, Synthesis, characterization and performance studies of kaolin-fly ash-based membranes for microfiltration of oily waste water, Journal of Petroleum Science and Engineering 194, 107475, 2020.

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Conference Presentations/ Publications

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2. B. Prasad, A. Samanta, Post-combustion CO_2 capture using functionalized supported sorbents, National Seminar on Transforming waste into valuable resources for mitigating Greenhouse Gas Emissions, Organized by the Steel Authority of India Limited, Bokaro Steel Plant, 5-6 January 2024, Bokaro.

3. B. Prasad, A. Samanta, Carbon dioxide capture using functionalized structured adsorbents, CHEMCON 2023 (Platinum Jubilee Celebration), 27-30 December 2023 Kolkata.

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5. C. Lad, B. Prasad, T. K. Mondal, A. Samanta, Hydrogen production using scrap aluminium from municipal waste, National Seminar on Sustainable & Green

Technologies for Industries, Organized by The Institution of Engineers (India) Bokaro Steel City Local Centre on 26-27 August 2023, Bokaro.

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8. Ashwani Kumar Dubey,Arunkumar Samanta, Pinaki Sarkar, Vinod Kumar Saxena, Kinetics of silica supported CuO as an oxygen carrier for chemical looping oxygen uncoupling (CLOU), CHEMCON 2018, Jalandhar.

9. Runa Dey, Ravisha Goswami and Arunkumar Samanta, Modeling of CO_2 adsorption properties on KCC-1, CHEMCON 2018, Jalandhar.

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