Curriculum Vitae

Name:	**Dr. Sudipta De**
Designation:	Professor, Mechanical Engineering Department Jadavpur University, Kolkata, India
Sex	Male
Date of Birth	31st October 1966
Address for Communication:	Flat-2R 9/7, Purbachal Phase II, Sector III, Salt Lake, Kolkata: 700097, India
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Academic Degrees:

Degree	Year	Discipline	Institute	Remarks
Doctor of Philosophy (PhD)	2001	Engineering	Indian Institute of Technology (IIT), Kharagpur, India.	Title: 'Some thermodynamic and experimental studies related to clean coal technology'
Master of Technology (MTech)	1991	Thermal Sciences	Indian Institute of Technology (IIT), Kharagpur, India	CGPA 8.3
Bachelor of Engineering	1989	Mechanical Engineering	Bengal Engineering College (Calcutta University)	First Class

Post Doctoral Research Work Abroad

- As guest researcher at the Department of Energy Sciences, **Lund University**, **Sweden** during March, 2005 to June, 2006.
- Visiting researcher to Department of Energy Sciences, **Lund University, Sweden** during July-September 2007 under **Swedish Research Link international collaboration funding**.
- Nominated ***Senior Scientist*** for ***clean and sustainable energy technology*** by Indian National Science Academy (***INSA***), New Delhi to visit Department of Energy Systems of the ***Technical University of Munich*****,** Germany under International Collaboration/Bilateral Exchange Program in 2010.
- Selected Indian Professor under ***Erasmus Mundus External Cooperation Window India4EU program*** of European Union to visit Department of Energy Technology, **Royal Institute of Technology (KTH), Stockholm, Sweden** during 2010 in ***sustainable energy engineering*** discipline.

- Several visits to **University of Stavanger, Norway** as Indian Coordinator of an **Indo-Norwegian Cooperation program (INCP)** and **UTFORSK (2 Year)** project.
- Visited and made research presentations in Kings College, London, UK in April 2017 as Faculty Member of Project E-QUAL.
- Visited and made research presentations in University of Bologna, Italy in April 2017 as Faculty Member of Project E-QUAL
- Several visits to Norway as Indian Coordinator of UTFORSK project (2018-2019) between Norway and BRICS countries and Japan.

Experience

Previous positions:

Period	Place of Employment	Designation
01st April 1991 to 20th September 1991	Developments Consultant Ltd., Kolkata, India	Design Engineer
23rd September 1991 to 21st September 1998	Mechanical Engineering Department Jadavpur University	Lecturer
22nd September 1998 to 20th September 2001	Mechanical Engineering Department Jadavpur University	Lecturer (Senior scale)
21st September 2001 to 07th April 2008	Mechanical Engineering Department Jadavpur University	Reader
08th April 2008 to till date	Mechanical Engineering Department Jadavpur University	Professor

Subjects Taught/Teaching
UG Courses: Thermal and energy engineering courses
PG Courses: Advanced Thermodynamics, Energy Conservation, Advanced Power Plants, Sustainable Engineering etc.

Administrative Experience
- Convener, **Seminar subcommittee of Golden Jubilee celebration of Jadavpur University**.
- **Former member and convener, Administrative committee of Industry Institute Partnership Cell of Jadavpur University**.
- Teacher in charge of Departmental Library (2003-2005).
- **Nodal Officer, Faculty Development Program of World Bank funded Technical Education Quality Improvement Program (TEQIP), Phase II** of Jadavpur University (2013-2017).
- **Deputy Coordinator, Internal Quality Assurance Cell (IQAC), Jadavpur University**.
- **Nodal Officer-Academic** of World Bank funded MHRD-India project: **Technical Education Quality Improvement Program (TEQIP)**, Phase III of Jadavpur University (2018-2021). JU was the mentor of two institutes: University Departments of Rajasthan Technical University (Kota) and Tripura Institute of Technology, Agartala during TEQIP, Phase III.
- **Former Vice President, Institute Innovation Cell (IIC), Jadavpur University**
- **Chairman, Curriculum and Syllabus Revision Committee** of **both UG and PG** of the **Faculty of Engineering and Technology of Jadavpur University** (2022)

Some Relevant Professional Experiences

- National expert of 'Alternate Technology/Clean Technology' in the database of **Ministry of Environment and Forest, Government of India**
- Member *of the Technical Committee of Energy and Power Systems of* **IASTED (International Association of Science and Technology for Development)***, Canada during 2005-2008*
- Academic partner from India of consortium **'Explore Energy' of Royal Institute of Technology (KTH), Stockholm, Sweden.** (http://www.exploreenergy.eu/Partners/IndiaPartners/tabid/1185/language/en-GB/Default.aspx)
- Editorial advisory board member of **'Sustainable Energy Developments' of the CRC Press** (http://www.taylorandfrancis.com/books/series/SUED/).
- Senior research fellow of **'Indian-European Multi-Level Climate Governance Research Network'** (http://www.indiaeu-climategovernance.org/people/senior_researchers/de_sudipta/index.html)
- Expert Member of High Power Committee of **Kolkata Metropolitan Corporation (KMC)** for saving of energy in public utilities.
- Expert member of West Bengal Board of Boiler Operation Engineers under the **Directorate of the Boiler, Government of West Bengal**.
- Member of the Core Group of the Jadavpur University for **Indo – European Interactions on Higher Education (responsible for 'sustainable energy')** coordinated by **British Council**.
- Invited Indian Expert in **Round Table on 'Applying Energy –Food-Water Nexus Thinking'** on 13th November 2013 of **Research Council UK-India (RCUK-India)** in New Delhi.
- Member, Project Management cum Technical Coordination Committee of MSME Technology Facilitation Centre of **Government of West Bengal and Council of Scientific and Industrial Research (CSIR), India**.
- Invited presentation in **Joint Working Group Seminar on Higher Education and Research Collaboration, India-Norway**, 16th September 2016 at **University of Oslo, Oslo, Norway**.
- Member, Education Committee, **The Bengal Chamber of Commerce and Industry, Kolkata.**
- Key Resource Person, Energy and Environment Committee, **The Bengal Chamber of Commerce and Industry, Kolkata.**
- **Chairperson** in session titled "6-1 Renewable Energy – I" at **'American Society of Mechanical Engineers (ASME) 2017 Gas Turbine India Conference'**, December 7-8, 2017 in Banglore, India.
- **Jury Member, "INNOVACIÓN 2018"** by the **IEM, Kolkata,** 23-25 January 2018.
- **Jury Member, DAAD Falling Walls Lab India 2018** on 7th April 2018, organized by the **German Academic Exchange Service, New Delhi.**
- Expert for evaluation of the **UNMESH 2018 projects of the CESC, Kolkata of the RP-Sanjiv Goenka** Group on 21st July 2018.
- **Chairperson** in session titled "6-4 Renewable Energy" at **'American Society of Mechanical Engineers (ASME) 2019 Gas Turbine India Conference'**, December 5-6, 2019 at IIT-Madras, Chennai, India.
- Elected **Fellow of the West Bengal Academy of science and Technology (WAST),** 2019.
- **Awarded 'INSA Teachers Award 2019' by Indian National Science Academy (INSA), New Delhi in 2019.**

- **Member, PCD-7 Standardization of Solid Biofuels: Groups for 'Terminology and Nomenclature' and 'Briquettes/Pellets' of the Bureau of Indian Standards (BIS).**
- Key Resource Person, Industry-Academia Connect Task Force, **The Bengal Chamber of Commerce and Industry, Kolkata**.
- **Leader** of the Indian delegation in the **13th Plenary Meeting of ISO/TC 238 'Solid Biofuels'** during 19-20 May 2022. India participated in such meeting first time as a participating member. Previously India was an observing member.
- Expert Panelist in the program: 'Promoting Research Excellence in Academics Across West Bengal', jointly organized by the **West Bengal State Council of Higher Education and Elsevier**, August 16-17 2022.
- Awarded **'Shiksharatna Award 2022' by the Government of West Bengal** for lifetime contribution to the Higher Education and Research.
- Awarded **Fellow of the International Society for Energy, Environment and Sustainability (ISEES), at IIT-BHU,** 16th December 2022.
- Nominated on invitation from the **Bureau of Indian Standards, New Delhi as the Indian Expert for the 14th Plenary Meeting of ISO/TC 238 Solid Biofuels** on 11th May 2023 at Vancouver, Canada.

Areas of Research:

Energy and exergy analyses of power and cogeneration plants, Fluidized bed combustion, Gas-solid separation, Biomass cofiring with coal, Simulation of advanced power plants, Energy conservation, Fuel cells, Artificial neural network modeling of energy systems, carbon capture, distributed power and polygeneration. Low temperature waste heat recovery through innovative cycles, integration and optimization of renewable energy systems, Multi Criteria Decision Making (MCDM), Sustainability assessment of energy systems including LCA

Sponsored projects

Title of the Project	Duration (Status)	Own Designation	Other Investigators	Funding Authority (Amount)
'Enhancing quality assurance management and benchmarking strategies in Indian universities' (EQUAM-BI)	2017-2020 (ongoing)	Staff Member from Jadavpur University	With other eight Indian higher education institutes including National Assessment and Accreditation Council (NAAC) and five EU institutes.	**European Commission (EURO 7,04,132)**
'Sustainable energy and environment solutions: technology and policy' (Under call from Norway for collaboration in	2018-2020 (completed)	Project Coordinator (India)	From JU and University of Stavanger, Norway	**Norwegian Centre for International Cooperation in Education – SIU (3 Lakh Norwegian Kroner)**

higher education and research with BRICS Countries and Japan)				
'Development of efficient biomass conversion routes for biofuel production and utilization'	2017-2020 (ongoing)	Co-PI	From JU, IIT-Kharagpur (India), University of Eastern Finland (Finland) and Helmholtz Centre for Environmental Research – UFZ (Germany)	**EU, DST and DBT (India) (50 Lakhs, Only Indian share)**
'Road map for decarbonization of Indian energy system: exploring innovative solutions' Under Indo-Norwegian Cooperation Program 2014 (INCP)	2015-2019 (completed)	Project Coordinator (India)	From JU and University of Stavanger, Norway	**UGC (India) and RCN (Norway) (Rs.53,15,760/- , Indian share Total: Rs. 1,06,55,385)**
E-QUAL (Enhancing Quality, Access and Governance of Undergraduate Education in India)	2013-2017 (completed)	Member	From four Indian and two EU Universities	**European Union (EU) (1 Million Euro)**
Indian-European Multi-Level Climate Governance Research Network	2013-2015 (completed)	From three Indian and two EU Universities	Member	**Indian Council of Social Science Research (ICSSR, India), the Deutsche Forschungsgemeinschaft (DFG, Germany), and the Netherlands Organisation for Scientific Research (NWO, The Netherlands) (Rs. 1.5 Crore)**

Sustainable energy research including energy efficiency	2014 to 2018 (ongoing)	Group Leader	A group of nine faculty members	**Department of Science and Technology (DST) –PURSE Program, Government of India (34 lakhs)**
Modeling of biomass gasification fuel cell / gas engine integrated CHP system.	2010 to 2013 (Completed)	Group leader	A group of four researchers	**DST –PURSE Program, Government of India (7 Lakhs)**
Development of ANN simulation and condition monitoring tools for coal based power and cogeneration plants of India	January, 2007 to December, 2007 (Completed)	Asian Principal Investigator (PI)	Prof. Mohsen Assadi (Swedish Principal Investigator)	**Swedish Research Council (75,000 Swedish Kronor)**
Energy and exergy analyses of combined heat and power generation employing clean coal technology	September, 2002 to August, 2005 (Completed by Mach, 2005)	PI (Under SERC Fast Track Scheme for Young Scientists)	Nil	**DST, Government of India (Rs. 2,04,000/-)**

Some relevant invited/Keynote/Plenary lectures:

1. 'Modelling, analysis and simulation of energy systems: a brief review of my research', in the **Institute of Energy Technology**, **Technical University of Berlin**, Berlin, Germany on 23rd July, 2007.
2. 'Advanced coal based power and cogeneration' in **Indian National Clean Coal technology Mission Meeting at Hyderabad** on 02nd April 2010.
3. 'Towards sustainable energy systems: brief overview of some results,' **Department of Energy Systems, Technical University of Munich,** Munich, Germany, May 20, 2010.
4. 'For improved energy solution: a brief overview of our activities,' **Department of Energy Technology, Royal Institute of Technology (KTH), Stockholm, Sweden**, September 14, 2010.
5. 'Sustainable energy solutions: a very brief overview of our recent activities' **Centre for Sustainable Energy Solutions,** University of Stavanger, Norway on 13th June 2011.
12. 'Electricity from fossil fuels: present status and future possibilities' Keynote lecture, **ICAMB 2012, Vellore Institute of Technology (VIT) University**, India on 11th January 2012.
6. 'Sustainable Energy: Some Facts Some Confusion', **Annual Energy and Environment Conclave (2014) of Bengal Chamber of Commerce and Industry (BCCI)**, ITC Sonar, Kolkata, August 29-30, 2014.
7. 'Water-Energy Nexus: Searching the Dots', in **Int. Conference on Water-Energy Nexus: Connecting the dots** funded by the **Norwegian Ministry of Foreign Affairs** and organized by **The Energy and Resources Institute (TERI), New Delhi**, September 2-3, 2014.

8. 'Future of Undergraduate Education in India', in concluding panel discussion of a 2-day **Int. Conf. on "Enabling Pedagogies: Higher Education in India" funded by EU**, **Shiv Nadar University, Greater Noida**, March 26-27, 2015.

9. **'**From general basics up to the advanced H2-IGCC: a very brief overview of the integrated gasification combined cycle (IGCC)' in **Int. Workshop on ASPECTS OF FLUIDIZED BED TECHNOLOGY at IIT, Guwahati**, July 9-10, 2016.

10. 'Overview of Indian Energy Sector' in **Indo-Norwegian Workshop: Decarbonization roadmap for India, University of Stavanger, Norway**, 5th October 2016. (http://www.uis.no/news/conferences/decarbonization-roadmap-for-india/)

11.'Is distributed poly-generation utilizing local resources a sustainable solution for India?', **1st International Society for Energy Environment and Sustainability Conference on Sustainable Energy and Environmental Challenges, 26-28 February, 2017, Mohali, India.**

12. 'Sustainable energy research: brief overview of work of our group', **University of Bologna, Italy**, April 11, 2017.

13. 'Sustainable energy: a transformational journey' at the **10th Annual Energy and Environment Conclave of the Bengal Chamber of Commerce and Industry (BCCI) at ITC-Sonar, Kolkata;**
(http://www.bengalchamber.com/environment-and-energy-conclave.html) during 23-24 August 2017**.**

14. 'Sustainable energy: introduction of the concept', in interdisciplinary post graduate course **'Master in Energy, Environment and Society' (https://www.uis.no/studies/master-s-programmes-in-english/energy-environment-and-society/) at the University of Stavanger, Norway** on 26th September, 2017 under **Indo-Norwegian Cooperation Program.**

15. **Institute expert lecture:** 'Sustainable energy solution through efficient integration and utilizing local renewable resources: Indian context' at **Motilal Nehru National Institute of Technology, Allahabad** on 1st December 2017.

16.'Evaluation of advanced coal-fuelled electricity generation technologies', in regional workshop on "Indian Power Sector: Supporting a Low Carbon Transition" organized by **NITI Aayog, India in association with International Energy Agency (IEA) and Asian Development Bank (ADB)** on 23rd April 2018 **at Hotel Lalit Great Eastern**, Kolkata.

17. 'Distributed energy solution: a few case studies with agricultural wastes of India', in National Conference on Waste to Energy Conversion (NCWEC) during 28th-29th December 2018, **organized by IIT Guwahati and NIT-Mizoram** at Aizawl.

18. Panelist from academia in industry-academia Panel Discussion on "Importance of Innovation Ecosystem" organized by the **Confederation of Indian Industry (CII), Eastern Region at ITC Sonar, Kolkata** on 16th March 2019.

19. 'Role of Renewables for Energy Transition', **Thematic talk in The American Society of Mechanical Engineers Gas Turbine India (ASME GT India) Conference at Indian Institute of Technology (IIT), Madras, Chennai,** 5-6 December 2019.

20. 'Distributed energy solution potential: a few case studies with agricultural wastes of India' in **workshop on 'Need for Indian Standards for Solid Biofuels' jointly organized by Bureau of Indian Standards (BIS,The National Standards Body of India) and Central Institute of Mining and Fuel Research of Council of Scientific and Industrial Research (CSIR-CIMFR), CSIR-CIMFR Digwadih Campus, Dhanbad, 27- 28 January 2020.**

21. 'Is decentralization from only centralized system is a future sustainable energy solution for India?', **QIP sponsored short term course on Recent Advances in Affordable & Clean Energy (RAACE-2020): A Roadmap to SDG 7, Department of Electrical & Instrumentation Engineering, Sant Longowal Institute of Engineering & Technology** (virtual mode), 14-19 September 2020.

22. ‘Coaching (WP5): experience of Jadavpur University’, **Final Dissemination Conference of EQUAM-BI Consortium (India and EU)**, (virtual mode), 8-9 July 2021.
23. ‘On different 2nd law methods: brief introduction of concepts’, Inaugural key note talk in **AICTE ATAL FDP Course on ‘Exergy and thermoeconomic investigation in power generation systems’ by Kingston Engineering College, Vellore, Tamil Nadu**, 9-13 August 2021
24. ‘Cofiring biomass pellets/briquettes in coal fired plants: techno-economic-environmental issues’ in interaction meet on **‘Standardization of Solid Biofuels – Briquettes/Pellets’ at CSIR-CIMFR, Dhanbad Digwadi Campus, organized jointly by BIS and CSIR-CIMFR**, 11th November 2021.
25. 'Exploring options for decentralized renewable power and other utilities suitable for Indian context', **Research and Industrial Conclave (RIC) 2022, Indian Institute of Technology (IIT) Guwahati**, Assam, India, 22nd January 2022.
26. 'Future Indian energy: should we step towards decentralisation?', **Centenary Lecture Series (CLS) 2021-22, Mechanical Engineering Department, IIEST (previously B.E. College)**, 16th centenary lecture, 12th April 2022.
27. ‘Sustainable Energy Research: Exploring Solutions for India’, Invited talk for scientists, **C-DAC: Centre for Development of Advanced Computing**, **Kolkata**, 12th May 2022.
28. ‘Meeting local demand of energy utilities with locally available renewable resources: case studies for remote Indian villages’, Invited lecture on World Environment Day celebration of Institution of Engineers, India, 5th June 2022.
29. ‘Is decentralized hybrid system a sustainable option for inclusive energy transition of India?’, Invited Lecture in 2-day **National Conference on “Energy Transition and Future Challenges of Indian Power Sector**, Kolkata, 23-24June 2022.
30. ‘Quantitative analytical methods for decarbonization of the energy, fuel and chemical supply chains’, Full day Workshop jointly organized by **Jadavpur University, Texas A&M University and the Bengal Chamber, Kolkata**, 22nd July 2022 **(Role: one of the two instructors of the Workshop)**
31.’Sustainable Development: Why and What’, **INSA Remote Lecture (2022)** delivered at the **Ramakrishna Mission Ashrama, Cherrapunji (Sohra), Meghalaya** as the **INSA Teacher Awardee for ‘INSA remote teaching**’, 25-26 October 2022
32. ‘Is Optimized Distributed Hybrid Renewable Systems a Future Sustainable Energy Solution for India?’, **VII International Conference on Sustainable Energy and Environmental Challenges (VII SEEC) of International Society for Energy, Environment and Sustainability (ISEES)**, IIT-BHU, 16-18 December, 2022.
33. ‘Energy conservation: origin, evolution and relevance to Indian industry’, 6th Edition of Discussion Forum on Ecological Sustainability in the Industrial Region, **Bengal Chamber of Commerce and Industry**, Haldia, 24th November 2022.
34. ‘Impact of cofiring biomass with coal in power plants – A techno-economic assessment’, in **regional level workshop on " Sustainable co-firing of Biomass in TPP: A step towards Carbon Neutrality, Damodar Valley Corporation**, Kolkata, 20th December, 2022
35. ‘Energy conservation: ‘why, what, how; global and Indian contexts’, in national seminar on ENERGY CONSERVATION FOR A SUSTAINABLE FUTURE, **Haldia Energy Limited and Haldia Development Authority**, Haldia, 7th February, 2023
36. ‘Vision East: Green Initiatives led Growth & Employment (Introduction to the theme)’, **Interaction Session with Shri Bhupender Yadav, Hon’ble Union Minister of Environment, Forest and Climate Change and Labour and Employment by Indian Chamber of Commerce, Kolkata**, 14th February, 2023.
37. ‘Optimum distributed hybrid energy systems as a sustainable solution for poor and remote Indian villages’, **Indo-French Workshop on ‘Clean and Sustainable Energy Technologies (Infinite)’, CSIR-National Physical Laboratory, New Delhi, jointly organized by CSIR-**

Central Mining and Fuel Research, Dhanbad, India and National Centre for Scientific Research (CNRS), Paris, France, 21-24 February 2023.

Some relevant conference, session and courses organized:

a) Convener, Technical committee, 5th **ISHMT-ASME Heat and Mass Transfer Conference** at Kolkata, India, January, 3-5, 2002.

c) Organized a lecture series (over one-year) on 'Sustainability of Indian Energy Sector' jointly with **Bengal Chamber of Commerce and Industry (BCCI) and European Business and Technology Centre (EBTC) with World Bank funding**. (*http://teqip.jdvu.ac.in/for_website/web_lecture.html)*

d) Organized (as Indian Coordinator of INCP project) with the **Bengal Chamber of Commerce and Industry (BCCI) and University of Stavanger, Norway under Indo-Norwegian Cooperation Program:** 'Knowledge forum: bridging industry, academia' **(https://news.webindia123.com/news/articles/india/20171227/3239448.html)** on 27th December, 2017 at the BCCI, Kolkata.
(https://www.youtube.com/watch?v=NfRfu2jAaYk#action=share)

e) Organized (as Indian Coordinator of UTFORSK project) with the **Bengal Chamber of Commerce and Industry (BCCI) and University of Stavanger, Norway under UTFORSK Program**: 'An interactive workshop on "Energy system in transition" at Hotel Hyatt Regency, Kolkata on 2nd May 2018.

g) Nominated by the **American Society of Mechanical Engineers (ASME)** to organize at Jadavpur University in November 2018: **American Society of Mechanical Engineers (ASME) GT India Student Seminar in the Eastern Zone.**

h) **Session Chair of Session 6-4: Renewable Energy (Solar, Wind) of The American Society of Mechanical Engineers Gas Turbine India (ASME GT India) Conference at Indian Institute of Technology (IIT), Madras, Chennai, 5-6 December 2019.**

Any other information:

Regular reviewer of several reputed International Journals in the field of energy.

M.Tech/PhD Examiner of several reputed Institutes including IITs (Kharagpur, Guwahati, Bombay, Delhi), IIEST, Shibpur, Monash University, Australia etc.

RELEVANT FULL LIST OF PUBLICATIONS OF DR. SUDIPTA DE

A) **Edited International Journals:**

1. **De, S. (Leading guest editor)** and Chowdhury, R. (Guest Co-editor) (2023): Special issue on **Anaerobic Digestion and Sustainable Integrated Biorefinery** of the international journal **Sustainability (MDPI).**
2. **De, S. (Leading guest editor)**, Nikpey, H. and Saha, C. (Guest co-editors) (2023): Special Issue on **Energy Transition and Sustainability** of the international journal **Sustainability (MDPI)**.
3. Chattopadhyay, H and **De, S. (joint guest editors)** (2022): **Special Issue on 'Recent Advances in Energy and Sustainable Development', IEI-C Journal (Springer)**.

B) Texts/ References/ Edited Books and Journals:

1. **De, S. (2021): Nag's Power Plant Engineering, 5th Ed. McGraw Hill Education,** ISBN-13: 978-93-5460-005-0; ISBN-10: 93-5460-005-0 (Published on 7th July 2021)
2. **De S.**, Bandyopadhyay S, Assadi M, Mukherjee D.A (2018): **Sustainable Energy Technology and Policies- A Transformational Journey (Vol 1); book doi: 10.1007/978-981-10-7188-1 (Springer)**
3. **De S**., Bandyopadhyay S, Assadi M, Mukherjee D.A (2018): **Sustainable Energy Technology and Policies- A Transformational Journey (Vol 2); book doi: 10.1007/978-981-10-8343-8 (Springer)**
4. Gautam A, **De S**, Dhar A, Gupta JG, Pandey A (2018): **Sustainable Energy and Transportation Technologies and Policy; book doi: 10.1007/978-981-10-8343-8 (Springer)**
5. **De, S.** (2011): Energy and exergy analyses of clean coal technology, ISBN 978-3-8454-1135-4, **AV Academikerverlag GmbH & Co. KG, Germany**.

C) Book chapters:

1. Thakur, B., **De, S.*** (2023): 'Emerging façade materials and their processing for large apartments: a comparative energy and environmental performance', **Comprehensive Materials Processing, 2E, Elsevier,** (under review),
2. Mondal, S. and **De, S.*** (2023): 'New generation of materials and processes for environmentally compliant refrigeration', **Comprehensive Materials Processing, 2E, Elsevier**, (under review)
3. Bose, A and **De, S.*** (2022): '90034. Carbon capture by photosynthesis of plants', in **Encyclopedia of Renewable Energy, Sustainability, and the Environment (Elsevier)**, edited by Mohammad Reza Rahimpour. (accepted)
4. Das, S. and **De, S.*** (2022): '80031. Hybrid energy system optimization', in **Encyclopedia of Renewable Energy, Sustainability, and the Environment (Elsevier)**, edited by Mohammad Reza Rahimpour. (accepted)
5. Mondal, S. and **De, S.*** (2022): '30017. Geothermal energy application in power generation' in **Encyclopedia of Renewable Energy, Sustainability, and the Environment (Elsevier)**, edited by Mohammad Reza Rahimpour. (accepted)
6. Mondal, S. and **De, S.*** (2022): 'Cogeneration and trigeneration applications of natural gas', **Adv. in Nat. Gas Vol. 7 - Natural Gas Products and Uses (Elsevier),** edited by Mohammad Reza Rahimpour**.** (accepted)
7. Sen, D., Pati, S., **De, S.** and Chowdhury, R. (2022): 'Thermodynamic and phase equilibrium models of syngas'. **Advances in Synthesis Gas: Methods, Technologies and Applications (Elsevier)**, Vol. 4, Editors: Mohammad Reza Rahimpour, Mohammad Amin Makarem, Maryam Meshksar, 3-38. ISBN: 978-0-323-91879-4.
8. Ray, A.; Das, P. and **De, S.*** (2022): 'Multi-criteria optimization for system integration of decentralized off-grid hybrid renewable polygeneration', in **Handbook of Smart Energy Systems (Springer)** Editors: M. Fathi et al. https://doi.org/10.1007/978-3-030-72322-4_76-1.
9. Mondal, S. and De, S. (2022): 'Diesel Engine Waste Heat Recovery Schemes for Improved Fuel Economy and Reduced Emissions: Simulation Results', Chapter in **Engine Modeling and Simulation (Springer)**, 341-364.
10. Mondal, S. and **De, S.*** (2022): 'Polygeneration Systems in Industry', Chapter 11 in **Polygeneration systems: Design, processes and technologies (Elsevier),** Editors: Francesco Calise, Laura Vanoli, Massimo Dentice d'Accadia, Maria Vicidomini, 411-430. https://doi.org/10.1016/B978-0-12-820625-6.00002-5

11. Jana, K. and **De, S.*** (2021): 'Efficient and low - carbon energy solution through polygeneration with biomass', in **Advances in Carbon Management Technologies (CRC Press),** Editors: Subhas K. Sikdar and Frank Princiotta, Vol 2, pp. 208-226 (book doi: https://doi.org/10.1201/9781003056157).
12. Jana, K. and **De, S.*** (2020): 'Overview of CCS: A Strategy of Meeting CO2 Emission Targets', **Encyclopedia of Renewable and Sustainable Materials (Elsevier),** Vol.3, pp. 628-639, Editors Saleem Hashmi and Imtiaz Ahmed Choudhury (https://doi.org/10.1016/B978-0-12-803581-8.11026-4).
13. Ray, A and De, S.* (2020): 'Renewable Electricity Generation: Effect on GHG Emission.' **Encyclopedia of Renewable and Sustainable Materials** (**Elsevier),** Vol.3, pp. 728-735, Editors Saleem Hashmi and Imtiaz Ahmed Choudhury. (https://doi.org/10.1016/B978-0-12-803581-8.11015-X).
14. Mondal, S. and **De, S.*** (2020): 'Power and Other Energy Utilities From Low Grade Waste Heat – Novel Technologies to Reduce Carbon Footprint, **Encyclopedia of Renewable and Sustainable Materials (Elsevier),** Vol.3, pp. 667-677, Editors Saleem Hashmi and Imtiaz Ahmed Choudhury**.** (https://doi.org/10.1016/B978-0-12-803581-8.11037-9).
15. Jana K and **De, S.*** (2020): 'Polygeneration as efficient and de-carbonized energy solution', **Encyclopedia of Renewable and Sustainable Materials** (**Elsevier),** Vol.3, pp. 655-666, Editors Saleem Hashmi and Imtiaz Ahmed Choudhury. (https://doi.org/10.1016/B978-0-12-803581-8.11005-7).
16. Ray A and **De S.*** (2020): 'Hybrid Renewable Multigeneration: Low Carbon Sustainable Solution with Optimum Resource Utilization', **Encyclopedia of Renewable and Sustainable Materials (Elsevier),** Vol.3, pp. 526-533, Editors Saleem Hashmi and Imtiaz Ahmed Choudhury. (https://doi.org/10.1016/B978-0-12-803581-8.11036-7).
17. Roy, J., Dasgupta, S., Ghosh, D., Das, N., Chakravarty, D., Chakraborty, D. and **De, S.** (2019): 'Governing National Actions for Global Climate Change Stabilization: Examples from India', **Climate Change Governance and Adaptation: Case Studies from South Asia** (**CRC Press**), Editors: Anamika Barua, Vishal Narain, Sumit Vij. ISBN: 978-1-138-05450-9, pp. 137-159.
18. Ray A and **De,S.*** (2018); 'Distributed Polygeneration Using Solar Energy: A Future Sustainable Energy System for India', **Applications of Solar Energy** (**Springer)**, Editors: Himangshu Tyagi, Avinash Kumar Agarwal, Prodyut R Chakraborty and Satvasheel Powar, ISBN 978-981-10-7205-5.
19. Jana, K., **De, S.*** (2017): 'Distributed energy solution for India: Exploring the possibilities' In**: Sustainable Energy Technologies and Policy** (**Springer).** Eds. S. De, S. Bandyopadhyay, M. Assadi, DA Mukherjee. (DOI: 10.1007/978-981-10-7188-1_6), pp. 133-154.
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