

**Richa Kothari, M.Phil.(Energy & Environment), Ph. D. (Energy & Environment)**  
<https://scholar.google.com/citations?user=tBD5uxIAAAAJ&hl=en>  
**Citations: 1297 ; h-index: 15; i10-index: 17 (Google Scholar)**

**Name:** **Dr.Richa Kothari**  
**Designation:** **Associate Professor**  
**Department:** Environmental Sciences  
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**Worked as: WARI Fellow, Robert B. Daugherty Water for Food Institute, University of Nebraska-Lincoln, Lincoln, NE, USA-68588**

### **Academic Profile**

- M.Phil and Ph.D. in Energy & Environment.
- More than 10 years of teaching and research experience.
- Ph.D./M.Phil/M.Sc guidance: guided 02 Ph.D;01 M.Phil, 40 M.Sc. students and 15 M.Tech.
- Deputy co-ordinator for M.Tech/M.Sc. Energy & Environment (2013 to 2017) at Babasaheb Bhimrao Ambedkar University ,Lucknow (U.P.).
- Edited Books:02 ; Book Chapter: 20; Patents: 01

### **RESEARCH INTERESTS**

Bio-energy production approaches, Low-cost wastewater treatment technologies.

### **RESEARCH/ACADEMIC EXPERIENCE**

9<sup>th</sup> April 2008 to 27<sup>th</sup> Nov. 2017 **Assistant Professor**, School of Environmental Sciences, Babasaheb Bhimrao Ambedkar University, (Central Government University), Lucknow (U.P.), India

Aug. 2006 to 8<sup>th</sup> April 2008 **Lecturer**, Amity Institute of Biotechnology, Amity University of Uttar Pradesh, Noida (U.P.) India

### **Working on Research Project:**

**DST, Govt. of India Project** -Study of policies and mechanism that could facilitate delivery of STI output for social inclusion in **Energy** sector, (Total duration –05 years) (Sanctioned amount Rs.64,32,000 /- (every year) Sanctioned year for 2014-2019), Babasaheb Bhimrao Ambedkar University

**Co-PI: Dr. Richa Kothari.** (Energy Section)

## TEACHING SKILLS

### Theoretical grounds/Electives

Energy resources, Environmental pollution, Environment biotechnology, Waste to energy generation, Natural resources and their Management, Environmental concerns & strategies.

### Languages

English (writing & Speaking); Hindi (Mother Tongue)

## LIST OF PUBLICATIONS (SCI Journal) and Citation Index

### (a) INTERNATIONAL & NATIONAL JOURNALS

#### Year: 2017

1. Har Mohan Singh, Atin K. Pathak, Kapil Chopra, V. V. Tyagi, Sanjeev Anand, Richa Kothari. Microbial Fuel Cell: Sustainable Solution for Bioelectricity Generation and Wastewater Treatment, *Biofuels* (2017).(Accepted).
2. **Richa Kothari**, Shamshad Ahmad, Vinayak V. Pathak, Arya Pandey, Saubhagya, Kapil Kumar, V.V. Tyagi. Experiment based thermodynamic feasibility with co-digestion of nutrient-rich biowaste materials for biogas production. *3 Biotech* (2017) (**Impact Factor-1.361**)(Accepted)
3. Mohammad Baqir, **Richa Kothari**, Rana Pratap Singh. Characterization and ranking of sub tropical trees in a rural plantation forest of Uttar Pradesh, India as fuelwood using Fuelwood Value Index (FVI). **Environment, Development and Sustainability. (Accepted)**
4. Shamshad Ahmad, Vinayak V. Pathak, **Richa Kothari**, Rajeev Pratap Singh; Prospects for pretreatment methods of lignocellulosic waste biomass for biogas enhancement: opportunities and challenges, *Biofuels* (2017): <https://doi.org/10.1080/17597269.2017.1378991>
5. Vinod Kumar, Jogendra Singh, V. V. Pathak, Shamshad Ahmad, **Richa Kothari**. Experimental and kinetics study for phytoremediation of sugar mill effluent using water lettuce (*Pistia stratiotes* L.) and its end use for biogas production, *3 Biotech* (2017) 7:330; DOI:10.1007/s13205-017-0963-7. (**Impact Factor-1.361**)
6. Richa Kothari, Arya Pandey, Shamshad Ahmad, Ashwani Kumar, Vinayak V. Pathak, V. V. Tyagi. Microalgal cultivation for value-added products: a critical enviro-economical assessment, *3-Biotech*. August-2017; Vol. 07; (04). (**Impact Factor-1.361**)
7. Mohd Baqir, Ashish K. Mishra, **Richa Kothari**, Rana Pratap Singh. Calorific Value and Fuel Wood Consumption Patterns of a Forest Plantation Made by Villagers at Kahinure (Distt Mau), Uttar Pradesh, India. *Climate Change and Environmental Sustainability*. Vol.05; No.1; April 2017; pp.35-41.
8. Richa Kothari, Virendra Kumar, Vinayak V. Pathak, V.V. Tyagi. Sequential hydrogen and methane production with simultaneous treatment of dairy industry wastewater: Bioenergy profit approach, *International Journal of Hydrogen Energy*. Vol.42 (8); Feb. 2017; pp. 4870-4879, (**Impact Factor-3.582**)
9. Richa Kothari, Virendra Kumar, Vinayak V. Pathak, Shamshad Ahmad, Ochieng Aoyi, V.V.Tyagi; A critical review on factors influencing fermentative hydrogen production, *Frontier of Biosciences Vol.22; March 2017; pp.1195-1220 (Impact Factor-2.8)*

10. Richa Kothari, Vinayak V. Pathak, Arya Pandey, Shamshad Ahmad, Chandni Srivastava, V.V. Tyagi, A novel method to harvest *Chlorella sp.* with low cost bio-flocculent: Influence of temperature with kinetic and thermodynamic functions, *Bioresource Technology*, Vol. 225; Feb.2017; pp.84-89, (**Impact Factor-4.917**)

**Year: 2016**

11. V. Kumar, Richa Kothari, V.V.Pathak and S K Tyagi, Optimization of Simple Sugars and Process pH for Effective Biohydrogen Production Using Enterobacter Aerogens: An Experimental Study, *Journal of Scientific & Industrial Research* Vol 75, October 2016, pp. 626-631(**Impact Factor-0.385**)

12. Virendra Kumar, Richa Kothari, Vinayak V. Pathak, S. K. Tyagi, Optimization of Substrate Concentration for Sustainable Biohydrogen Production and Kinetics from Sugarcane Molasses: Experimental and Economical Assessment; Waste Biomass Valorization, (**Impact Factor-1.337**)

13. Vinayak V. Pathak, Shamshad Ahmad, Arya Pandey, Vineet V. Tyagi, D. Buddhi, Richa Kothari; Deployment of Fermentative Biohydrogen Production for Sustainable Economy in Indian Scenario: Practical and Policy Barriers With Recent Progresses, *Curr Sustainable Renewable Energy Rep. Springer*. DOI 10.1007/s40518-016-0052-2

14. Vinayak V. Pathak, Richa Kothari, A. K. Chopra, Shamshad Ahmad, A. K. Pandey, N. A. Rahim; Effect of solvent extraction methods of oil yields and its parametric feasibility with *C. pyrenoidosa*. IEEE conference Proceeding, 14-15 November CEAT-2016, Kuala Lumpur, Malaysia.( <http://digital-library.theiet.org/content/conferences/10.1049/cp.2016.1344>).

15. D.S. Malik, C.K. Jain, Anuj K. Yadav, Richa Kothari, Vinayak V. Pathak, Determination of Adsorption Isotherms and Kinetic Parameters for Biosorption of Cu (II) on Raw Pine Needles: An Experimental Study , *International Journal of Innovative Research in Science, Engineering and Technology* , Vol. 5, Issue 10, October 2016

16. D.S. Malik, C.K. Jain, Anuj K. Yadav, Richa Kothari, Vinayak V. Pathak, Removal of methylene blue dye in aqueous solution by agricultural waste, *International Research Journal of Engineering and Technology* , Volume: 03 Issue: 07 -2016

12. Barkha Vaish, Pooja Singh, **Richa Kothari**, Vaibhav Srivastava, Prabhat Kumar Singh, Rajeev Pratap Singh. The potential of bioenergy production from marginalized lands and its effect on climate change. April-2016, *Climate Change and Environmental Sustainability*. 4(1): 7–13.

13. V.V. Tyagi, A.K. Pandey, D. Buddhi, **Richa Kothari**. Thermal performance assessment of encapsulated PCM based thermal management system to reduce peak energy demand in building. 2016; *Energy and Buildings*; (**Impact factor-3.167**)

**CHAPTERS IN EDITED BOOK**

1. Rifat Azam, Arya Pandey, **Paul N. Black**, V.V.Tyagi, **Richa Kothari**; Bio-processes for wastewater reuse: closed loop system for energy options. Edited by: Dr. Rajeev Pratap Singh, Dr. Shannon B. Hunt and Dr. Alan Kolok; Book Title “Water Conservation, Recycling and Reuse: Issues and Challenges”. Springer.(In Press)
2. Poonam, Shamshad Ahmad, Narendra Kumar, Paromita Chakraborty, **Richa Kothari**; Plant growth under stress conditions: Boon or bane. Edited by:Dr.Narendra Kumar and Dr.Vertika Shukla; Book Title: *Plant Adaptation*

*Strategies in Changing Environment* to be published by Springer Nature, Singapore.(In Press)

3. Shamshad Ahmad, Arya Pandey, **Richa Kothari**, Vinayak. V. Pathak, Vineet. V. Tyagi. Closed Photobioreactors: Construction Material and Influencing Parameters at the Commercial Scale; Chapter\_ID\_48469; Photobioreactors: Advancements, Applications and Research; **Editors:** Yiu Fai Tsang (The Education University of Hong Kong, Hong Kong SAR, China); Nova Science Publishers, Inc., NY. March 2017
4. Shamshad Ahmad, Arya Pandey, Vinayak Vandan Pathak, Vineet Veer Tyagi, **Richa Kothari**. Phycoremediation: Algae as ecofriendly tools for the removal of heavy metals from wastewaters. Chapter no. 12; Bioremediation of Industrial Wastes for Environmental Safety. Editor: R.N.Bhargava. Springer International. (Article in Process).
5. **Richa Kothari**, Arya Pandey, Virendra Kumar, V.V. Tyagi. Algae based biohydrogen: Current status of bioprocess routes, economical assessment and major bottlenecks, Algae and Environmental Sustainability. Springer. Editors: **Singh**, Bhaskar, **Bauddh** Kuldeep, **Bux**, Faizal (Eds.). 2016. (ISBN 978-81-322-2641-3)
6. Atin Kumar Pathak, **Richa Kothari**, Har Mohan Singh, Saubhagya Singh, V.V. Tyagi and D.P. Singh. Microbes: A Viable Mean for Wastewater Treatment and Source of Bioenergy (2016); Microbes and environmental management, Studium Press, Edited by: Prof. D. P. Singh and Dr. Jay Shankar Singh.
7. Atin Kumar Pathak, V. V. Tyagi, Har Mohan Singh, Vinayak V. Pathak, **Richa Kothari**, Chapter-2, Membrane-Less Microbial Fuel Cell: A Low-Cost Sustainable Approach for Clean Energy and Environment, Emerging Energy Alternatives for Sustainable Environment, TERI Press, Editors: D. P. Singh, Richa Kothari, V.V. Tyagi; ISBN-9788-1799-34111. March 2016
8. Vijay K. Jayswal, V. V. Tyagi, **Richa Kothari**, D. P. Singh, S. K. Samdarshi, Chapter-5, Role and Initiatives of Indian Government Policies for Growth of Wind Energy Sector, Emerging Energy Alternatives for Sustainable Environment, TERI Press, Editors: D.P.Singh, Richa Kothari, V.V. Tyagi; ISBN-9788-1799-34111. March 2016
9. Sonal Dixit, **Richa Kothari**, D.P. Singh, Chapter-17, Vermicomposting: A Potential Tool for Sustainable Management of Solid Waste, Emerging Energy Alternatives for Sustainable Environment, TERI Press, Editors: D. P. Singh, Richa Kothari, V.V. Tyagi; ISBN-9788-1799-34111. March 2016
10. Arya Pandey, Shamshad Ahmed, Virendra Kumar, Pratibha Singh, **Richa Kothari**, Chapter- 20, Solar Photocatalytic Treatments of Wastewater and Factors Affecting Mechanism: A Feasible Low-Cost Approach, Emerging Energy Alternatives for Sustainable Environment, TERI Press, Editors: D. P. Singh, Richa Kothari, V.V. Tyagi; ISBN-9788-1799-34111. March 2016
11. Bal Chandra Yadav, Praveen Kumar, Satyendra Singh, **Richa Kothari**, Chapter-23, Development in Metal Oxide Nanomaterial-based Solar Cells, Emerging Energy Alternatives for Sustainable Environment, TERI Press, Editors: D. P. Singh, Richa Kothari, V.V. Tyagi; ISBN-9788-1799-34111. March 2016

### **KEYNOTE / INVITED SPEAKER/Oral Presentation**

1. Oral Presentation; **Title: H-LCBF - Harvesting of *Chlorella sp.* with Low-Cost Bio-Flocculant: an Approach for Clean Environment with Bioprocess Engineering; Bioengineering-2017 at Chicago on 27-28<sup>th</sup> September 2017.**
2. Kothari Richa, “Carbon-water foot printing: an eco-friendly approach with algal biomass”, International Conference on Renewable Energy for Sustainable Environment: challenges and Remedies; Department of Energy Management; Shri Mata Vaishno Devi University; Katra, March 20-21, 2017 (Invited Lecture and and Session Chair)
3. Kothari Richa, “Emerging Challenges in wastewater treatment and its potential application for society”, 3<sup>rd</sup> LUSCON-2015 at Lucknow on 31<sup>st</sup> October-2<sup>nd</sup> November 2015.(Invited speaker)
4. **Kothari Richa**, in “**Water and Wastewater Management Summit**” at Centre for Renewable Energy and Water, Vaal University of Technology, Johannesburg, **South Africa** on February 25, 2015. (Keynote speaker)
5. **Kothari Richa**, "**New and Renewable Energy, Innovation and Inclusive Growth**", BRIDGES-2015. 16-17<sup>th</sup> January 2015. DST-CPR, BBAU at Lucknow. (Session Chair)

### **BOOK (S) PUBLISHED:**

1. Sohini Singh, Tanu Allen, **Richa Kothari**, Basic Environmental Sciences for Under Graduates. Published by Vayu Education of India, ISBN-978-83758-27-2, 2014.
2. D. P. Singh, **Richa Kothari**, V. V. Tyagi, Emerging energy alternatives for sustainable environment; TERI Publication House (***In Press***) Edited Book, TERI Press TERI II Habitat Place, Lodhi Road II New Delhi 110 003

### **Editorial Board Member:**

1. International Journal of Science, Technology & Society (Associate Editor) (ISSN - 2395-1605); B.B.A.University, Lucknow
2. IET Renewable Power Generation, Online ISSN 1752-1424
3. International Journal of Applied and Natural Science (Print ISSN: 0974-9411 | Online ISSN: 2231-5209) (Member)
4. International Journal of Environmental and Social Sciences (Member), Open Science Publications. ISSN Number: 2454-5953
5. International Journal of Biomass Conversion and Biorefinery; ISSN: 2190-6815 (print version); ISSN: 2190-6823 (electronic version); Journal no. 13399.

### **MEMBERSHIP IN PROFESSIONAL SOCIETIES**

Solar Energy Society of India (SESI)

People for Animals (PFA)

### **A1: ADDITIONAL CREDITS**

Selected for Research Associate ship funded by Council of Scientific and Industrial Research, GOI, at Center for Energy Studies, Indian Institute of Technology, New Delhi, India, Keyword: Hydrogen Production.