

Aneesh Kumar Chandel

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Academic Background:

Doctor of Philosophy (Ph.D.)

August 2020- present

University of Central Florida, Orlando, Florida

Major: Conservation Biology

Graduate Teaching Assistant

Master's

May 2020

Major: Agricultural Regulations

Courses- Statistics, Aquatic chemistry and analysis, Environmental soil chemistry

University of Arkansas at Pine Bluff

Pine Bluff, AR 71601, USA

Bachelor's

2017

Major: Agricultural Sciences

Courses: Soil Science, Agronomy & Crop Science

Banaras Hindu University

Varanasi, Uttar Pradesh, 221005, India

RESEARCH EXPERIENCE

Graduate Research Assistant

2018-2020

Department of Agriculture, University of Arkansas at Pine Bluff

Modified biochar properties for sustainable agricultural production

- Modified the surface functional groups of biochar using inorganic N-precursor to provide N-functional groups to the biochar and increase its efficiency for sorption removal of organic contaminants.
- Modified the surface functional groups of biochar using iron particles to provide magnetic property to the biochar and increase its efficiency for sorption removal of contaminants.
- Compared the sorption removal of contaminants by modified biochar and unmodified biochar.
- Determined the leaching of iron particles from the iron-modified biochar in the solution after the sorption.

Modification of biochar for advanced oxidation processes for environmental quality (soil, water) protection

- Used Sodium Persulfate as an oxidant to degrade organic contaminants.
- Used modified biochar to activate persulfate and determined its degradation removal efficiency.

Field Research Experience

- Bioremediation of Nickel and Cadmium in peri-urban soils of a district of India under the supervision of Dr. Amitava Rakshit, Department of Soil Science and Agricultural Chemistry, Banaras Hindu University, India, April-March 2015

Research Internship

- Priming seeds of Chickpea with *Pseudomonas* and *Trichoderma* strains to study their effects on the Plant Growth and Defense. November 2016 (Advisor- Dr. H.B. Singh, Department of Mycology and Plant Pathology, IAS, BHU, India).
- Interned in an NGO MAMTA Health Institute for mother and child, India, October-November 2016.

RESEARCH SKILLS

- Proficient in High Proficient Liquid Chromatography (HPLC), ICP-MS, C/N Analyzer, Spectrophotometer, SEM, FTIR.
- Proficient in MS Office (word, Excel and Power Point)
- Statistical Software (JMP)

MENTORING EXPERIENCE

Undergrad interns and new graduate assistants in my current lab.

Responsibilities

- Guided them in designing lab experiments
- Provided required training in lab instruments
- Guided them in performing entire lab experiments
- Helped in preparing both oral and poster presentations

HONORS AND AWARDS

- Best Poster Award (Third position): **Chandel, A.**, Sharma, H., Chen, H. Activation of Persulfate by N-Doped Rice Husk Biochar for the Removal of Contaminants. ASA-CSSA-SSSA Annual Meeting, San Antonio, TX, Nov 10-13. (*5-min rapid oral and poster presentation*).
- Represented India in Youth Exchange Program between India-Sri Lanka selected by Government of India, January 2017.

PUBLICATIONS

Research Articles

- Jakhar, D.S., Singh, R., **Chandel, A.K.**, Kumar, C., & Ojha, V. K. (2017). Mean Performance and Analysis of Variance of Thirty Genotypes for Twelve Characters Studied in Maize (*Zea mays L.*). Int. J. Curr. Microbiol. App. Sci. 6(4): 2782-2789. DOI: <https://doi.org/10.20546/ijcmas.2017.604.321>

Book Chapters

- **Chandel, A.**, Chen, H., Sharma, H.C., Adhikari, K., & Gao, B. (2019). Beneficial microbes for sustainable agriculture. In Chandra, R.C., & Sobti, RC (Ed.), Microbes for sustainable development and Bioremediation. Boca Raton, CRC Press, Taylor & Francis Group. (*accepted*)
- Adhikari, K., Mahato, G, R., Chen, H., Sharma, H.C., **Chandel, A.**, Gao, B. (2019). Nanoparticles and their impacts on seed germination. Plant growth regulation, Springer, Germany. (*accepted*)

CONFERENCES AND PROFESSIONAL MEETINGS

- **Chandel, A.**, Sharma, H., Chen, H. Engineered Magnetic biochar with Hematite and Goethite for Efficient Activation of Persulfate. ASA-CSSA-SSSA Annual Meeting, San Antonio, TX, Nov 10-13, 2019. (*Poster*)
- **Chandel, A.**, Sharma, H., Chen, H. Effects of Cation on the Adsorption of Ciprofloxacin by Biochar". The 19th Biennial Research Symposium by Association of 1890 Research Directors (ARD), March 29- April 3, 2019, Jacksonville, Florida. (*Poster*)
- Sharma, H.C., **Chandel, A.**, Chen, H. Synthesis of Magnetic Biochar for the Adsorptive Removal of Sulfamethoxazole. The 19th Biennial Research Symposium by Association of 1890 Research Directors (ARD), March 29- April 3, 2019, Jacksonville, Florida. (*Oral*)
- Sharma, H.C., **Chandel, A.**, Chen, H. Biochar Modification with Metal Oxide Nanoparticle for the Removal of Water and Soil Pollutant Sulfamethoxazole. 63rd Annual Rural Life Conference, February 1, 2019, Pine Bluff, AR. (*Poster*)
- **Chandel, A.**, Sharma, H., Chen, H. Ciprofloxacin Removal by Biochar Derived from Rice Hull and Pine Needles. 63rd Annual Rural Life Conference, February 1, 2019, Pine Bluff, AR. (*Poster*)

VOLUNTEERING ACTIVITIES

- Secretary of International Student association (2017-2018).