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# Shipra Pandey

Greetings. I wish to offer my candidature at Faculty of Bioscience Engineering or any similar faculty matching to my work-experience. Currently, I am working as a **Postdoctoral Researcher** in Prof. Venkat Gundabala's Lab, IIT Bombay.

To extend my goal towards the scientific contribution in **Sustainable Development Goal 2**, currently I am working on the bio-polymer based antimicrobial food packaging material.

I obtained my **PhD in Biological Sciences** (May 2020) with particular emphasis on synthesis of bionanomaterials for management of early blight disease in tomato from Division of Microbial Technology, CSIR-National Botanical Research Institute, India. During PhD, I have synthesized a peppermint nanoemulsion and used as bio-fungicide (PNE) in controlling growth of *Alternaria solani* in tomato. I received Senior Research Fellowship for the above project from the Council of Scientific & Industrial Research, India. I received **Best Thesis Award** in 2020 for giving eco-friendly solution to society.

In summary, during my research career, I have gained **extensive experience in biocompatible nanomaterial synthesis** which includes metal and essential oil based nanoemulsion for pathogen control. In addition to my research experience and publications, I have presented my research findings in **various national and international seminars, symposia, and conferences**. I have also validated a grassroot innovation practise for which I received SRISTI-BIRAC **Appreciation Award**. Being a young women researcher, I am also recipient of **Women excellence award** from Biotech Research Society of India.

To extend my work towards the **green nanotechnology in Agriculture and Food Science**, my postdoctoral work is focused on development of bio-based active food packaging material.

The major objective of my study is to develop a triple guard packaging film consists of active material: silver nanoparticles encapsulated lemongrass based nanoemulsion, reinforced into chitosan/alginate film. Recently, I presented my research work in national conference CompFlu2021 organised by Indian Society of Rheology (ISR). I have utilized my **8+ years' experience on green nanotechnology and pathogen control** into translational research by delivering a sustainable food packaging material to mankind.

To continue the concept of green and cost-effective solution for mankind, until now, I have published **15 research-articles in peer reviewed journals and 4 book chapters which attest to hard work, biological insight** and outstanding writing skills. Specifically, my experience with reviewing literature and writing various academic reports, as evident from the publications listed in my resume, has equipped me with the reading and writing skills you're looking for in your ideal candidate. Through my prior academic projects, I've learnt how to manage my work in a collaborative environment. I can maintain focus on my individual tasks, with full knowledge of how they contribute to the overall research goals, no matter how mundane and repetitive my tasks are.

I have strong experience over **synthesis of the organic and inorganic nanomaterial's** and its characterization by **DLS, TEM, FT-IR, SEM, SAED, contact angle, surface tension measurement, XRD, TGA**. Moreover, during postdoctoral tenure I have been experienced with various type of bio-polymer for film formation. Moreover, I have gained experienced on various characterization techniques for packaging film.

I am an extremely enthusiastic and motivated researcher, who is keen to learn, work, and understand the application of nanotechnology in agriculture. Besides this, presently, I am **also handling several academic and administrative work** in IIT Bombay (guiding PhD students, project writing, teaching assistantship, proctoring).

Given my education and experience of over eight years, I assure you that given an opportunity, I **will perform to the best of my abilities** to accomplish individual as well as team goals. I look forward to discussing my candidacy with you in person or over the phone. Please feel free to contact me for further information at your convenience.

*I look forward to hearing from you.*

Sincerely

Shipra Pandey