

Research in one sentence

To control light and exploit its properties for doing ultra-sensitive sensing

### What is your uniqueness in your research?

I work on nano structures for applications in biomedical and sensing fields. One of the other avenues of these particular structures is the advantage that you can control light and that is what we try to do by controlling the nano structure. That can be applied to many things. One of them that we are specifically looking at is water. For example, in India, you have a scarcity of good quality water. And the sensors that we develop are can be geared towards detecting impurities and contaminants in water.

### Background of joint research with Japanese Co-PI

My Co-PI is Prof. Hiroshi Fudouzi from NIMS (National Institute for Materials Science), and our topic of joint research is Colloidal Crystal Materials Group, Research Center for Functional Materials

Prof. Fudouzi is one of the leading experts in this area of photonic crystals. With him we have an unique thing where we leverage his expertise and my expertise to get something better.

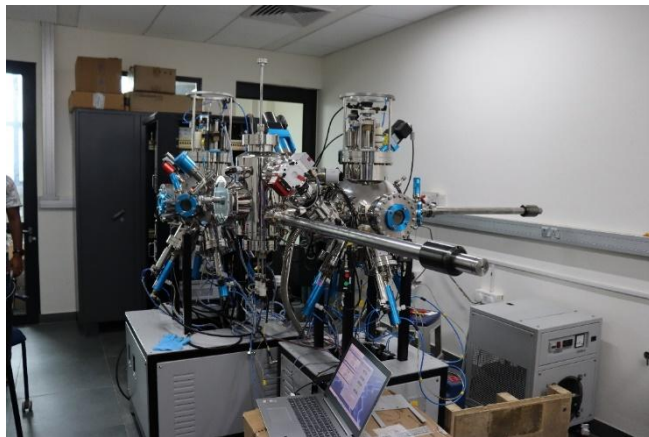
### What are the tips to have collaborated with Co-PI for so long?

We should find a mutual interest and elaborate interaction. These 2 tips lead you to sustainable collaboration.

### What are benefits from collaboration with Japanese Co-PI?

For MTech students or Ph.D. students, exposure to different ways of working in different fields is always beneficial.

For technical perspective, Co-PI's depth as well as breadth actually give me new point of view.



### Prospects regarding India-Japan collaboration.

I would love to explore more. Collaborating with more researchers from diverse background can actually pitch in and then possibly expand and apply this kind of thing in different industry, which we might not even have thought about.

### Do you recommend JICA Research Grant under FRIENDSHIP 2.0 to the other faculty members?

I would strongly recommend it. I mean, this is a very, very good opportunity to start.

Some people might not have prior existing collaborations, but this might be a very good opportunity for them to start. Japan Desk basically acts like a mediator and give basically a helping hand so that two collaborators can talk and find problems of mutual interest that will help both Indian people and Japanese people.

