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Research in one sentence

Green Hydrogen, Renewable energy, Water splitting.

What is your uniqueness in your research?

Our group activities are centered around utilizing unconventional methods to carry out chemical reactions with a special emphasis on the application in energy and environment. We use non-thermal plasma activation of the reactant molecules.

Background of the joint research with Japanese Co-PI

I was the Dean Academic Program of IITH (2017 to 2020) and the coordinator for Energy and Environment under the JICA FRIENDSHIP Project Phase1. I had several exchange visits, and one such event was the visit to Hokkaido University (HU), where IITH-HU decided to have a credit exchange program. I visited HU in 2018 and met my Co-PI, Vasudevan P. Biju, and we continued our interactions and wrote joint proposals, which were successful (SPARC¹ and DST-JSPS²). Through a long relationship, we have built a mutual interest in harnessing solar energy. We published many joint international publications in this direction.

¹ SPARC (Stratospheric Processes And their Role in Climate) is one of the international research projects under the World Climate Research Programme.

² DST-JSPS is India and Japan Science Cooperative Program between DST (The Department of Science and Technology, Ministry of Science & Technology, Government of India) and JSPS (Japan Society for the Promotion of Science) to promote bilateral scientific research collaboration.

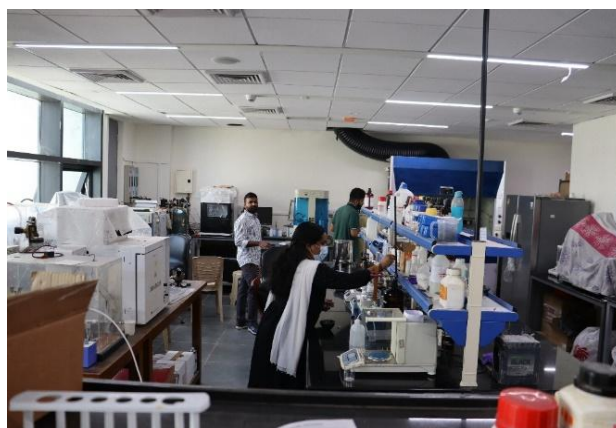
What are the tips to have collaborated with Co-PI for so long?

We have been following a complementary approach, exchanging ideas on a common theme. We used JICA support for initial visits, then explored other options like SPARC and JSPS-DST for a sustainable model. Furthermore, the Hokkaido University-STSI (Sustainable Transportation System and Infrastructure) program supported by the JSPS strengthened our academic relationship, including exchange visits, joint teaching, and student internships.

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

The most beneficial point of collaboration is to work with world-class researchers in a win-win situation for me.

For my students, exchange visits have been an important platform for their international exposure, and I believe the visits help them broaden their perspective.



Prospects regarding India-Japan collaboration

I have initiated several joint proposals with GIFU, Toyohashi, Kyoto, and Hokkaido Universities. Toyohashi and HU have been very successful in knowledge gain, joint publications, research outcomes, student exchange, etc.

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

Yes, I strongly do. Both faculty members and students should be exposed to such a competitive international environment.

This grant gives us an opportunity to establish and continue collaborative activities with Japanese professors. If we can make good friends, that must help our successful research. JICA has been at the forefront in extending cooperation to IITH in nurturing bilateral exchanges, infrastructure development, and social innovation.



Therefore, information and the benefits of JICA's academic programs should reach the nook and corner of other Indian academics and society to benefit the next-generation talents.