

# Celloraa Energy and ISC Konstanz have entered into a Strategic Partnership to Accelerate Industrialization of High-Efficiency n-Type PV Technology

**Konstanz, Germany – 03.03.2026 – The International Solar Energy Research Center (ISC) Konstanz, a leading global institute for applied photovoltaic (PV) research, today announced a strategic partnership with Celloraa Energy through MoU, to support the ramp-up of 1.2 GW of next-generation n-type solar cell production at Surat, Gujarat. The collaboration aims to bring best-in-class TOPCon technology to the global market, utilizing high-quality low OPEX German manufacturing equipment.**

Under the agreement, ISC Konstanz will serve as the primary technology and qualification partner for Celloraa Energy new high-volume manufacturing lines. The project focuses on establishing a robust 1.2 GW TOPCon production capacity, engineered to deliver superior sustainable efficiency and yield.

“This collaboration with Celloraa Energy embodies our mission to bridge the gap between cutting-edge research and industrial scale,” said Dr. Radovan Kopecek, Co-founder and Director of ISC Konstanz. “By combining ISC Konstanz’s deep expertise in n-type cell architecture with German precision equipment and Celloraa Energy manufacturing capabilities, we are creating a blueprint for high-volume production of the most efficient and reliable PV technology on the market.”

## **Beyond TOPCon: A Roadmap to Back-Contact Technology**

The partnership is structured to extend beyond immediate TOPCon production goals. A core component of the agreement includes a comprehensive training program for Celloraa Energy team, conducted by ISC Konstanz team to foster knowledge transfer and operational excellence.

Furthermore, the two entities will jointly establish a research and development roadmap aimed at next-generation device architectures. Following the stabilization of the 1.2 GW TOPCon lines, the collaboration will pivot toward the co-development of high-efficiency, low-cost Back-Contact (BC) technology. This forward-looking strategy positions Celloraa Energy to transition seamlessly to tandem-ready BC structures, ensuring long-term competitiveness in the global energy transition.

“Bringing the highest efficiency PV to market at scale requires more than just purchasing equipment; it requires a partnership that understands the physics of the device and the economics of manufacturing,” said Mr. Brijesh Gondaliya, Director of Celloraa Energy. “ISC Konstanz’s proven track record in piloting new technologies provides us with the confidence to

move rapidly from gigawatt-scale TOPCon production into the next era of BC devices, all while driving down the levelized cost of energy.”

The initiative underscores a shared commitment to accelerating the global energy transition. By deploying German-engineered production solutions and European R&D expertise, the partners aim to set a new benchmark for power density and reliability in the solar industry, making clean energy more accessible and efficient worldwide.

**About ISC Konstanz:**

The International Solar Energy Research Center Konstanz is one of the world’s leading institutes for applied photovoltaic research. Focused on high-efficiency solar cell concepts, ISC Konstanz supports the global PV industry through process development, characterization, and consulting services.

**About Celloraa:**

“CELLORAA ENERGY PRIVATE LIMITED is renewable energy company based in Surat, Gujarat, India, to strengthen India’s Photovoltaic (PV) value chain. The company’s strategic vision includes becoming a fully integrated clean energy provider—from manufacturing high-efficiency solar cells to developing utility-scale solar projects and future plans for silicon ingot and wafer integration. CELLORAA is positioning itself to contribute to India’s solar manufacturing expansion and support sustainable energy growth and making eternal impact.”

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ISC Konstanz and Cellorea Energy executives celebrate the signing of a Memorandum of Understanding to support the ramp-up and further development of gigawatt-scale n-type solar cell manufacturing and future back-contact technology development.