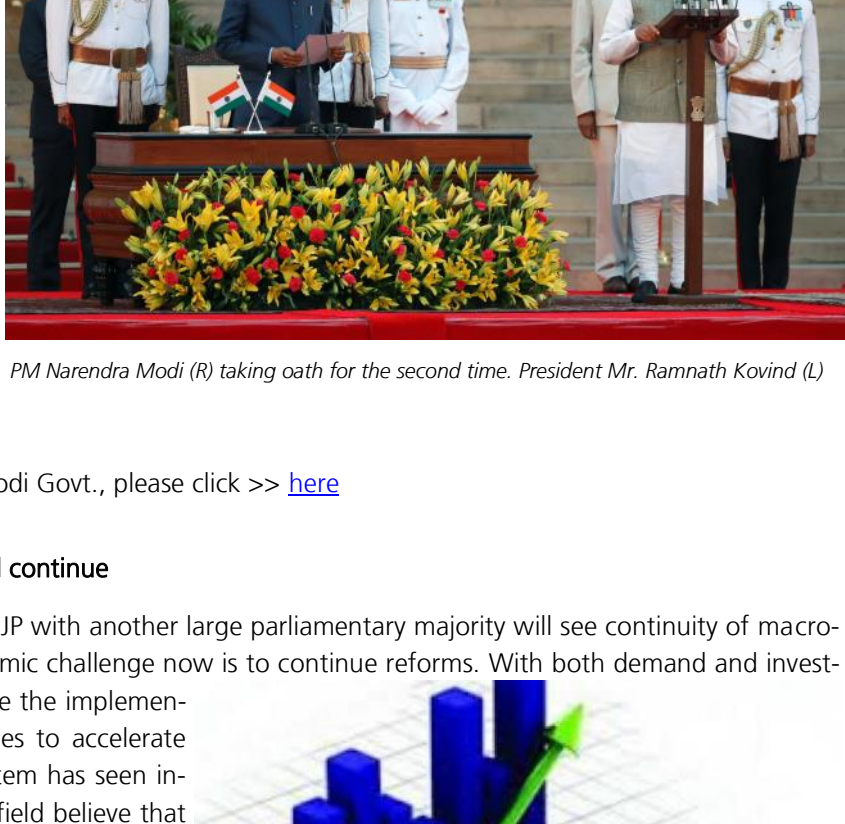




India General Elections 2019: Narendra Modi registers thumping win; sworn in as Indian Prime Minister for a second term

May 23rd, 2019 went down in history as the day when Narendra Modi registered a landslide win over a united Opposition. Narendra Modi and his ruling Bharatiya Janata Party (BJP) led National Democratic Alliance (NDA) have swept back to power. A party needs to win 272 seats for a majority in parliament. The party won 303 seats in the Lok Sabha, the lower house of India's parliament, bettering the 282 seats they won in 2014 - a performance that not many thought was possible. Riding on a massive saffron surge sweeping through most parts of India, the BJP-led NDA government became the only non-Congress government to return to power in the Indian political history. After Jawaharlal Nehru and Indira Gandhi, Narendra Modi also became the third prime minister of India who retained power for a second term with full majority in Lok Sabha. Prime Minister Narendra Modi and 25 Members of Parliament took oath on May 30th, 2019 at the Rashtrapati Bhavan. Over 8,000 guests attended to attend the ceremony in New Delhi with elaborate security arrangements put in place.



PM Narendra Modi (R) taking oath for the second term. President Mr. Ram Nath Kovind (L)

Click >> [here](#) for more info

To view the new list of Ministers in the new Narendra Modi Govt., please click >> [here](#)

PM Modi's big win signals strong Indian GDP growth will continue

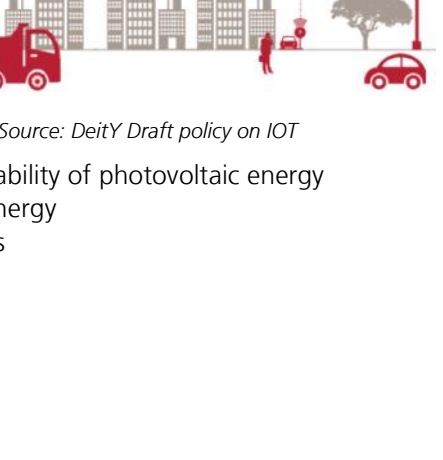
Stellar performance of Prime Minister Narendra Modi's BJP with another large parliamentary majority will see continuity of macro-economic policy in the next five years but the key economic challenge now is to continue reforms. With both demand and investment slowing, the government might have to re-evaluate the implementation of its policy agenda and adjust its policy priorities to accelerate growth in the near term. Though India's startup ecosystem has seen increased growth in the last few years, key players in the field believe that more needs to be done to make the environment conducive for their growth. The Indian start-up sector have already been ignited in the past five years with favourable policies around taxation and investments. But active government involvement is the need of the hour to resolve challenges such as unemployment, and funding for the growth of the industry and the economy at large.



Click >> [here](#) for more info

NITI Aayog plans index to rank states on artificial intelligence adoption

Govt. of India think tank NITI Aayog is planning to develop an artificial intelligence (AI) readiness index that will rank states on their capacity to adopt the technology for public service delivery and exploit its innovative potential. The index could be made into the first few indices that the Aayog will develop in its second term after the successful roll-out of the health, education, water composite index and the agriculture index in the last few years. Aayog has been aggressively moving towards outcome-based monitoring and has in the past ranked states on key social indicators, much in line with its role of promoting competitive and cooperative federalism. NITI Aayog CEO Amitabh Kant has already written to all states and ministries requesting them to identify key projects across the five identified sectors where artificial intelligence can be adopted.

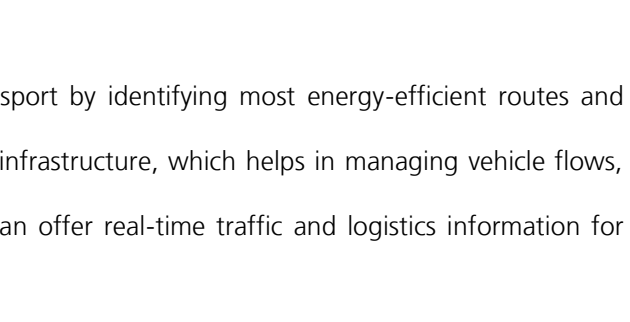


Click >> [here](#) for more info

Article

Artificial Intelligence (AI) in Energy & Environment:

AI is being used in energy sector in several ways Making energy clean, affordable and reliable. India, being the fastest growing economy in the world, is keen to have a significant stake in the AI revolution. While AI is not have not been picked up significantly in India yet, globally, they have been making waves.



Source: Deity Draft policy on IOT

Potential use cases in the energy - environment sector:

Smart energy grids (AI Optimised):

AI optimised energy system modelling and forecasting decreases unpredictability and increases efficiency, power balancing, use, and storage of renewable energy through intelligent grids enabled by smart meters and also improve the reliability and affordability of photovoltaic energy

- Neural networks for solar: Can improve the reliability and affordability of photovoltaic energy
- smart metering - real-time information on energy usage which reduces wastage and loss
- Smart lighting and heating systems: To utilise lighting and heating only when required
- predictive infrastructure maintenance

Reduced waste and emissions:

- Reducing energy consumption and release of harmful gases and waste
- Precision strength: Robots minimising the need for larger less efficient machines
- Eliminating product waste: More efficient use of raw materials
- Industrial lifecycle tracking: Optimising maintenance, energy efficiency, recycling of machinery

Smart cities/homes:

- Smart sensors in offices and homes can increase safety by indicating and possibly taking remedial action against catastrophic risks such as fire, floods and earthquakes.
- Sustainable building design can maximise energy and product efficiency in building design and improve energy efficiency by switching heating and air-conditioning on or off at the right times to exploit off peak rates.
- Energy monitors which can learn electrical signatures in a smart office or home to generate insights and alerts on energy usage.

Smart Mobility systems

- Autonomous vehicles can improve the energy efficiency of road transport by identifying most energy-efficient routes and speeds.
- Big data, IoT and cloud-enabled vehicles communicate with transport infrastructure, which helps in managing vehicle flows, eco-driving and effective traffic control.
- AI-enabled autonomous drones and sensors linked to IoT platforms can offer real-time traffic and logistics information for optimised routing.

Disaster management

- Software applications of ML can detect patterns leading to a natural disaster (e.g. rotation tracks of cyclones, tornadoes).
- Machine learning models can estimate the range and severity of impact and trigger automated alerts and warnings with lead time for evacuation and risk control mitigation measures.
- Autonomous robots and vehicles can find utility in highly hazardous and contaminated ecosystems in recovery and clean-up
- In the event of a flood or earthquake, robots can be used to navigate tortuous locations, including small spaces, underwater areas and debris-ridden sites.

Ref: Google Environmental report, NITI Aayog, PwC, Deity

Article by Mr. Sanmati Naik, Manager - Energy (RE), Fraunhofer Office India.
He can be contacted at sanmati.naik@fraunhofer.in for specific enquiries and support.

Recent Events / Activities

May 7th - 15th 2019: Visit of Dr. Marius Mohr, Head of Group Bioprocess Engineering in Water Management and Circular Economy, Fraunhofer IGB, to India.

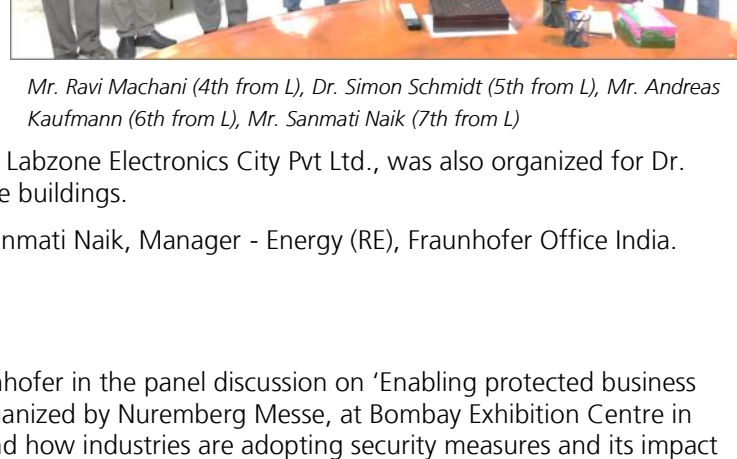
Stakeholders Workshop with Cochlin Smart Mission Ltd. (CSML), May 9th 2019:

Dr. Marius Mohr and Mr. Aditya Fuke, Manager - Smart Cities & IoT, Fraunhofer Office India, had coordinated a stakeholders workshop with Cochlin Smart Mission Ltd. (CSML) on May 9th 2019 to define the sectors of focus for the lab and draw out the critical areas of interventions. Dr. Mohr delivered a presentation, in which he explained the methodology, and then inputs were taken from the participants to understand main challenges, achievements, strategic priorities, future project ideas and identify the relevant stakeholders to be included in this project.

The stakeholders' participation from Kochi included representatives of Cochlin Smart Mission Ltd. (CSML), Kochi Municipal Corporation (KMC), Kochi Metro Rail Ltd. (KMRL), Greater Cochlin Development Authority (GDCA), Town Planning Department, Kerala State Electricity Board (KSEB), Kerala Water Authority (KWA), Public Works Department (PWD), Irrigation Department, and representatives of National Smart City schemes like Atal Mission for Rejuvenation and Urban Transformation (AMRUT) and Pradhan Mantri Awas Yojna (PMAY).

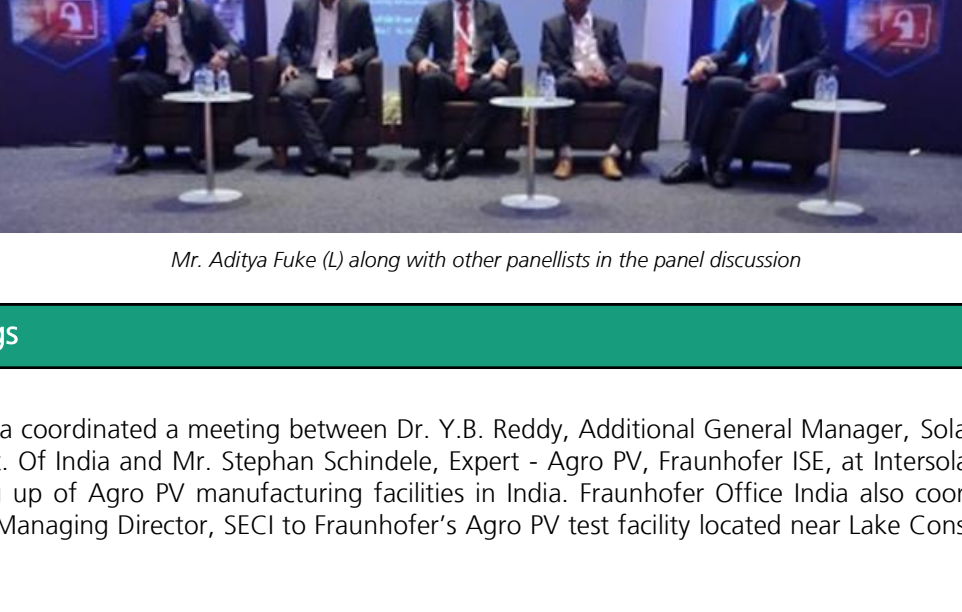


Workshop with CSML



Mr. Mohammed Hanish, MD, CSML (C), Dr. Marius Mohr (R)

After the workshop, a meeting with Mrs. Soumini Jain, Hon. Mayor, Kochi Municipal Corporation, was also organized to discuss the strategic priorities for urban development in Kochi and brief her on the stakeholders workshop held at CSML.



L to R: Mr. Aditya Fuke, Dr. Marius Mohr, Mrs. Soumini Jain, Representatives from CSML

After the workshop in Kochi, Dr. Mohr visited Coimbatore and had strategic meetings Mr. Sravan Kumar, Commissioner, Coimbatore City Municipal Corporation (CCMC) and Confederation of India Industry (CII) - Coimbatore, on Smart Water Future India (SWFI) Project.

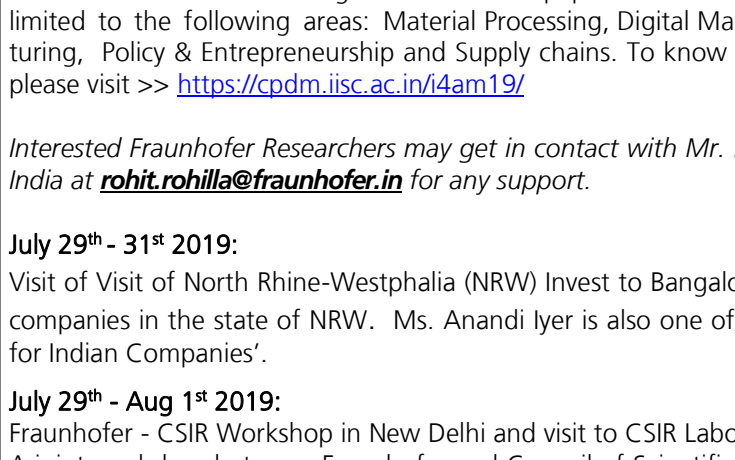
He also visited Solapur and had meetings with Solapur Municipal Corporation (SMC) under the project awarded to Fraunhofer IGB by Land Baden-Württemberg, to conduct city analysis of Solapur's present Water Infrastructure, and feasibility study to identify measures and sites for future infrastructure development.

Fraunhofer IGB has secured a contract from Heubach India Pvt. Ltd. Under this project, Dr. Mohr visited the facilities of Heubach India Pvt. Ltd. in Ankaleshwar, Gujarat, to assess the present water management infrastructure and suggest measures for upgradation.

Fraunhofer and Council of Scientific and Industrial Research (CSIR) would be organizing a joint workshop in Aug 2019 to enter into a joint R&D collaboration. As water is one of the identified areas of collaboration, a meeting between Dr. Mohr and Dr. Pawan Labhasetwar, Sr. Principal Scientist and Head - Water Management Technology Division, CSIR - National Environmental Engineering Research Institute (NEERI), was organized in Pune, to discuss the specific topics in water management to be included in the joint workshop between Fraunhofer and CSIR.

May 14th - 16th 2019: Visit of Dr. Simon Schmidt, Head of International Affairs, Fraunhofer IBP and Mr. Andreas Kaufmann, Technology expert and Former Spokesman - Building Innovation Alliance, Fraunhofer IBP to India

Fraunhofer Office India is in discussion with a real estate division of Machani Group on cooperation in implementation of advanced sustainable building technologies in real estate projects. Fraunhofer IBP is engaged in this project scope to offer advisory support on contractual engagement. As a next step, a workshop between Fraunhofer IBP and Machani Group was organized in Bangalore from May 14th - 16th 2019, to discuss potentials for Green Buildings. Dr. Simon Schmidt and Mr. Andreas Kaufmann conducted this workshop, in which, they offered advisory support on improvements of Machani Group's two projects namely Kormangala Tech Innovation campus and Project Ananda, for future readiness and sustainability in the buildings. Mr. Ravi Machani, Managing Director, Machani Group, along with other senior Technical Heads, were a part of this workshop.



Workshop Photograph



Mr. Ravi Machani (4th from L), Dr. Simon Schmidt (5th from L), Mr. Andreas Kaufmann (6th from L), Mr. Sanmati Naik (7th from L)

Additionally, a meeting with Mr. Somnath Maity, Head-Strategy, Labzone Electronics City Pvt Ltd., was also organized for Dr. Schmidt and Mr. Kaufmann, to discuss cooperation in sustainable buildings.

Dr. Schmidt and Mr. Kaufmann's visit was coordinated by Mr. Sanmati Naik, Manager - Energy (RE), Fraunhofer Office India.

May 15th 2019: IT-SA Conference 2019:

Mr. Aditya Fuke, Manager - Smart Cities & IoT represented Fraunhofer in the panel discussion on 'Enabling protected business growth and customer experience' in IT-SA Conference 2019, organized by Nuremberg Messe, at Bombay Exhibition Centre in Mumbai on May 15th 2019. The panel discussed the issues around how industries are adopting security measures and its impact on customer experience, data security in smart cities and increasing perspectives of trust with the customer through the adoption of technologies that strengthen security.



Mr. Aditya Fuke (L) along with other panellists in the panel discussion

Important meetings

May 15th 2019:

Fraunhofer Office India coordinated a meeting between Dr. Y.B. Reddy, Additional General Manager, Solar Energy Corporation of India Ltd. (SECI), Govt. Of India and Mr. Stephan Schindele, Expert - Agro PV, Fraunhofer ISE, at Intersolar Munich to further the discussions on setting up of Agro PV manufacturing facilities in India. Fraunhofer Office India also coordinated the visit of Mr. Jatindra Nath Swain, Managing Director, SECI to Fraunhofer's Agro PV test facility located near Lake Constance Hegelbach, Germany.

May 20th 2019:

Ms. Anandi Iyer, Director, Fraunhofer Office India and Mr. Aditya Fuke, Manager - Smart Cities & IoT, Fraunhofer Office India, met with Dr. Vidyadhar Mudkavi, Head, Council of Industrial Research and Development (CSIR) - Fourth Paradigm Institute, to discuss modalities of cooperation in Artificial Intelligence.

May 21st 2019:

Ms. Anandi Iyer represented Fraunhofer in 4th German Science Roundtable organized by Germany Embassy in New Delhi.

May 21st 2019:

Ms. Anandi Iyer met with Ms. Anna Roy, Sr. Adviser, NITI Aayog, Govt. of India to discuss competencies of Fraunhofer in Industry 4.0 and its offerings for Indian manufacturing base / SMEs.

May 22nd 2019:

Ms. Anandi Iyer and Mr. Sanmati Naik met with Dr. Y.B. Reddy, Additional General Manager, Solar Energy Corporation of India Ltd. (SECI), Govt. Of India, to discuss the next steps of cooperation in setting up of PV manufacturing facilities in India and a pilot project in Agro photovoltaics.

May 22nd 2019:

Ms. Anandi Iyer and Mr. Sanmati Naik met with Dr. Rama Bansal, Chief Scientist and Head, International S&T Affairs Directorate, Council of Scientific and Industrial Research (CSIR), to discuss the proposal for a joint workshop between Fraunhofer and CSIR to enter into a joint R&D collaboration in the areas of battery technologies, water management, sustainable buildings, additive manufacturing and surface coatings.

May 22nd 2019:

Ms. Anandi Iyer and Mr. Sanmati Naik met with Ms. Surbhi Goyal, Senior Energy Specialist and Ms. Mani Khurana, Senior Energy Specialist from World Bank India Office, to explore cooperation in the areas of Renewable Energy, Battery technologies, Industry 4.0 and Smart Cities.

May 29th 2019:

Ms. Anandi Iyer and Mr. Aditya Fuke represented Fraunhofer in a roundtable organized and chaired by Mr. Amitabh Kant, CEO, NITI Aayog, Govt. of India to discuss the proposal of Fraunhofer to be a Technology Partner to NITI Aayog for faster adoption and implementation of Industry 4.0 in India.

May 29th 2019:

Ms. Anandi Iyer and Mr. Aditya Fuke met with Mr. Anna Roy, Sr. Adviser, NITI Aayog, Govt. of India, and Dr. Caroline Silva-Garbade, Economic Counsellor, German Embassy in India, to discuss the visit of Ms. Anna Roy to Germany, for meetings at Federal Ministries and visit to Fraunhofer Institutes, with a deep focus on Artificial Intelligence.

Upcoming

June 7th - 8th 2019:

Visit of Ms. Anna Roy, Sr. Adviser, NITI Aayog, Govt. of India, to Fraunhofer Institutes namely SCAI, FIT, IAIS and IPT for an exposure to Fraunhofer's competencies in Industry 4.0 / Artificial Intelligence, and discuss the partnership proposal of Fraunhofer for faster adoption and implementation of the same in India. Ms. Anandi Iyer, Director, Fraunhofer Office India is coordinating this visit.

June 16th - 21st 2019:

Visit of Dr. Andreas Sterzing, Division Director Bulk Metal Forming, Fraunhofer IWU and Mr. Peter Blau, Division Director Machining and Removal, Fraunhofer IWU to India

June 25th 2019:

Visit of Dr. Sudhakar Marur, Chief Technology Officer New Materials Business, Tata Steel Limited to Fraunhofer Office India.

June 28th - 29th 2019:

1st International Conference on Industry 4.0 and Advanced Manufacturing (I4-AM 2019): I4-AM 2019 is organised by the Centre for Product Design and Manufacturing, Indian Institute of Science (IISc) Bangalore, under its CFCF on I4.0India@IISc (Smart Factory) within the SAMARTH Udyog Bharat 4.0 programme of the Department of Heavy Industries, Government of India. IISc has requested Fraunhofer to be its Technology Partner for this conference. Fraunhofer has been requested to participate in the inaugural session and the panel discussion on "Policy Challenges/Opportunities in Industry 4.0 and Advanced Manufacturing. A poster of the conference can be found here >> http://cpdm.iisc.ac.in/4am19/assets/data/4AM_conference_Poster_A3_CMYK.pdf

The conference also encourages submission of papers in all areas of Industry 4.0 and advanced manufacturing, including but not limited to the following areas: Material Processing, Digital Manufacturing, Autonomous Systems / Robotics, Sustainable Manufacturing, Policy & Entrepreneurship and Supply chains. To know more details of the conference and dates for submission of paper, please visit >> <https://cpdm.iisc.ac.in/4am19/>

Interested Fraunhofer Researchers may get in contact with Mr. Rohit Rohilla, Manager - Production Technology, Fraunhofer Office India at rohit.rohilla@fraunhofer.in for any support.

July 29th - 31st 2019:

Visit of Visit of North Rhine-Westphalia (NRW) Invest to Bangalore for Indo-German Meeting on business opportunities for Indian companies in the state of NRW. Ms. Anandi Iyer is also one of panellists in the panel discussion on "What Makes NRW Attractive for Indian Companies".

July 29th - Aug 1st 2019:

Fraunhofer - CSIR Workshop in New Delhi and visit to CSIR Laboratories in Nagpur, Pune, Hyderabad, Roorkee and Karaikudi: A joint workshop between Fraunhofer and Council of Scientific and Industrial Research (CSIR), Govt. of India, will be organized to enter into joint R&D collaboration in the identified areas of interest - battery technologies, water management, sustainable buildings, additive manufacturing and surface coatings. Nearly 15 Fraunhofer Researchers have submitted their proposal to be part of this workshop.

Aug 1st Sept 2019*:

Travelling exhibition "Germany's Energiewende" to Bangalore: Fraunhofer is the knowledge partner to this year's travelling exhibition.

Sept 2nd - 9th 2019*:

The 2nd International Conference on Large-Scale Grid Integration of Renewable Energy in India, Delhi organized by GIZ, United States Agency for International Development (USAID), Department for International Development, United Kingdom and Energynautics, Germany.

Sept 16th - 17th 2019*:

3rd Indo-German Conference on Sustainability in Engineering - Enhancing Future Skills and Entrepreneurship. This conference is jointly organized conference by Birla Institute of Technology and Science (BITS) Pilani and Technical University of Braunschweig. The organizers have requested Fraunhofer to submit research papers that will be published in scopus-listed proceedings book Springer.

Interested Fraunhofer Researchers may get in contact with Mr. Aditya Fuke, Manager - Smart Cities & IoT, Fraunhofer Office India at aditya.fuke@fraunhofer.in for any support.

Sept 16th - 20th 2019*:

Visit of the delegation of Cochlin Smart Mission Ltd. (CSML) to Germany for Morgenstadt Conference and visit to Fraunhofer's Smart City Labs. This visit is undertaken as a part of the project activity under Kochi Smart Smart City Innovation Lab

Oct 31st - Nov 1st 2019:

The 3rd Global RE-Invest. International Solar Alliance (ISA) Partnership and Renewable Energy Investors Meet and Expo. The 3rd Global RE-Invest will also host the Second Meeting of the ISA Assembly and the ASEAN Ministerial Meet. Click >> [here](#) for more info.

Nov 27th to 29th 2019*:

Intersolar India 2019, Bangalore

* Dates to be finalized

IGSTC Open Call for Indo-German Bilateral Workshops

The Indo-German Science & Technology Centre (IGSTC) invites proposals for organising Indo-German workshops on areas of mutual interest with an aim towards creating platforms for substantive interactions between scientists / researchers from academia and industry. The workshops have to take place in India or in Germany and to be designed around a specific research topic out of thematic areas relevant to both DST and BMBF, which includes the thematic areas of 2+2 project calls. Any other relevant topics of very high importance may also be considered. Proposals with a potential for generating follow up activities including joint projects are preferred. Training workshops as well as meetings between two institutions do not fall under the scope of this call.

Cut-off dates: 31st January and 31st July

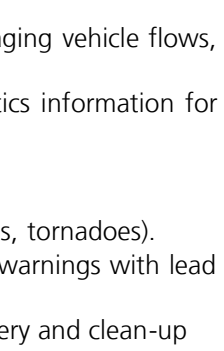
Click >> [here](#) for more info

Fraunhofer mentions in the news

[Fraunhofer IIS Licenses MPEG-H Audio Patents to LG Electronics](#)
[Fraunhofer Institute Displays High-performance OLED Microdisplay](#)
[MobiKa: A low-cost mobile robot that can assist people in a variety of settings](#)
[When elementary school students write their own computer programs](#)
[Laser structuring technique could triple productivity for automakers](#)

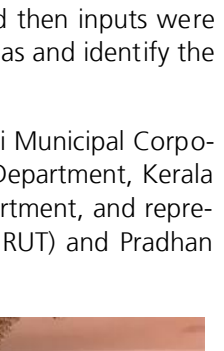
Automotive

[India's automotive sector lacks a business use case for AI implementation](#)
[Why carmakers are still betting on electric](#)
[India's electric mobility mission expected to originate 10 million jobs: Report](#)
[From April 2025 you might only see electric 2-wheelers on Indian roads](#)
[India's automotive test centres to facilitate industry demand in new tech era](#)



Manufacturing

[Modi 2.0: Daunting challenge of reviving the manufacturing sector](#)
[India's manufacturing sector growth slows in April amid election uncertainty: PMI](#)
[Why an industrial policy is crucial](#)
[US-China Trade War Boosts India's Appeal as a Manufacturing Hub](#)
[The digital enterprise - Thinking Indian industry further](#)



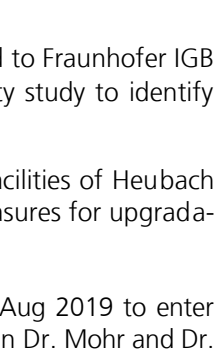
Renewable Energy

[Coal here to stay despite India's ambitious goals for renewable energy](#)
[Tamil Nadu emerging as a solar power producing state](#)
[Rooftop solar projects must for India to meet 175 GW renewable energy goal](#)
[India must de-risk solar power sector: Ajay Mathur, DG, TEF](#)
[8 Women-led energy startups receive a Seed Fund through POWERED Accelerator](#)



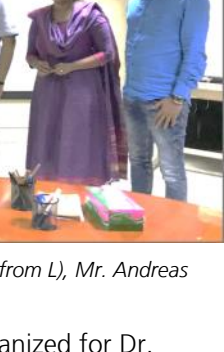
Smart Cities

[5th Smart Cities India 2019 expo inaugurated by Durga Shanker Mishra, Secretary, MoHUA](#)
[New tech solutions to drive India's Smart City Mission](#)
[Start-ups are critical for progress in India's smart city mission](#)
[What's smart about Smart Cities?](#)
[Use AI for solving social sector problems, Niti Aayog tells Centre, states](#)



Research & Development

[Inspired by Elon Musk and Jeff Bezos, India's start-up space sector is set for lift-off](#)
[MNRE's NITSE to Hold Workshop for Startups Specializing in Solar Technology in June 2019](#)
[India witnesses 'fastest energy investment growth': IEA](#)
[5 IT's, 200 researchers, and 40 faculty: India's INR240 crore project for a seat at the 5G table](#)
[Away from the metros, a new breed of deep-tech startups is solving 'real India' problems](#)



Economy

[Government's second term will be absolutely growth-oriented: Anil Agarwal](#)
[Indian economy projected to grow at 7.1% in FY20: UN report](#)
[10 ways the new Modi government can kick-start the economy](#)
[100-day plan is about pushing big ticket reforms: Amitabh Kant](#)



Visit <http://www.fraunhofer.in/>

Fraunhofer Office India e-Newsletter is a monthly feature and a compilation of Fraunhofer Activities and Industry Specific News Updates of India.

To unsubscribe from this e-Newsletter, please email to aditya.fuke@fraunhofer.in

All photo credits: Google