

Outline of TeFFA's Achievements

Date	Event (Venue)	Summary
Nov 14, 2019	<p>The 8th Michael Nobel Sustainability Technology Symposium (Teshima Conference Room, Tokyo Tech Front, Tokyo)</p> <p style="text-align: center;">Program²⁸ Summary²⁸</p>	<p>In this symposium, we put focus on "Reuse and Recycle Technology" in order to control the threats to environment which rapidly expanding around the world. We discussed on the advanced approaches in EU and Nordic countries, 3R (Reduce-Reuse-Recycle) strategy promoted by Ministry of the Environment, Japan, psychological analysis on consumers' recycling behavior (Tokyo Institute of Technology), leading-edge technology of incineration associated with power generation (Hitz), reuse and recycle business of PV panels (NextEnergy and Resources Co., Ltd.).</p> <p>Prior to the symposium, we visited the most advanced incineration plant at Suginami, Tokyo.</p>

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Aug 1, 2019	Indo-Japan Collaborative Seminar (Lab for Advanced Nuclear Energy, Tokyo Tech) Program²⁷ Summary²⁷	A collaborative seminar on “Emerging India – Role of Japan in her Economic Growth” was held at Tokyo Tech. Dr. Vinay Sahasrabuddhe, President of Indian Council for Cultural Relations (ICCR) and Member of Parliament, Rajya Sabha, was scheduled to participate in the seminar, but he could not because of the extension of Parliament. Therefore, Mr. Om Prakash Sakhlecha, MLA from Jawad assembly constituency, Madhya Pradesh, took his place. Professors of Tokyo Tech presented the advanced technologies in the field of biotechnology, nuclear energy and superconductivity. Mr. Yogendra Puranik (Yogi-san), India-originated councilor of Edogawa-ku, talked about life-style and problems of Indian people who live in Japan.
Nov 21, 2018	The 7 th Michael Nobel Sustainability Technology Symposium (Teshima Conference Room, Tokyo Tech Front, Tokyo) Program²⁶ Summary²⁶	“EV and Battery Technologies in Support of Global Sustainability” was discussed in the symposium. At the start, Mr. Kato, Chairperson of TeFFA, delivered a message from Dr. Nobel instead of him, who had a traffic constrain on the way to Japan. Mr. R. Kumar gave an unscheduled talk about the status of Indian industries, and a hope for technological collaboration with Japan. Dr. Sato presented a status and prospects on EV and battery industries. Dr. Kumura told about Nissan’s EV strategy. Prof. Kannno presented cutting-edge study on the all-solid-state battery on video. Panel discussed on the possibility of international collaboration in the field of EV and battery.
July 6, 2018	The 7 th Workshop of University of Tsukuba Forum on Power Electronics Tomorrow (Tokyo Campus, University of Tsukuba) Program²⁵ Summary²⁵	The 7 th workshop was held concerning “Application of SiC-MOSFET Devices to EV”. 80 people was participated and discussed on EV application of power electronics. Tow PhD students were presented their research results. Prof. Chiba of Tokyo Tech talked about SR motor for EV application. Research activities at AIST was reported on SiC trench MOSFET with built-in SBD (SWITCH-MOS). EV strategy was presented from Nissan Motor Co., Ltd.

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June 14, 2018	The 2 nd US-Japan-China Collaborative Workshop on Advanced Medical Technologies (Suzukakedai Campus, Tokyo Institute of Technology) Program²⁴ Summary²⁴	More than forty (40) participants were gathered, including guests from China, India and students of Tokyo Institute of Technology, and earnestly discussed on the advanced medical technologies based on lectures by four professors from Stanford University and Tokyo Institute of Technology. The main topics were leading-edge cancer therapy.
Nov 9, 2017	The 6 th Michael Nobel Sustainability Technology Symposium (Teshima Conference Room, Tokyo Tech Front, Tokyo) Program²³ Summary²³	“Role of hydrogen technologies in support of global sustainability” was discussed in the symposium. Dr. Nobel explained his organization of Nobel Sustainability Trust (NST), followed by lectures on TOYOTA’s FCV, PANASONIC’s ENE-FARM and Research activities on hydrogen energy at Tokyo Institute of Technology. Prof. Hirose of Kyushu Univ. appeared in video and talked about Hydrogen Council. Panel discussed how to promote international collaboration in the field of hydrogen technology.
March 3, 2017	The 6 th Workshop of University of Tsukuba Forum on Power Electronics Tomorrow (Tokyo Campus, University of Tsukuba) Program²² Summary²²	The 6 th workshop was held concerning SiC MOSFET having trench gate structure and their applications. 81 researchers from academia and industry were attended the workshop and discussed on characteristics of SiC MOSFET devices with trench gate structure and their applications such as EV, power source equipment, train, accelerator and so on.
Sept 6, 2016	TeFFA Workshop 2016 (Ookayama Campus, Tokyo Tech) Program²¹ Summary²¹	Dr. Michael Nobel made a speech on academia-industry collaboration in Europe and other countries, followed by six lectures from universities and industry. At the panel discussion, the lack of coordination function was pointed out regarding academia-industry collaboration in Japan. The panel also discussed on collaboration between engineering and medical science, which needs a systematic activities to accelerate the R&D in Japan.

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May 26, 2016	<p>The 5th Michael Nobel Sustainability Technology Symposium (Nishi-waseda Campus, Waseda University, Tokyo)</p> <p style="text-align: center;">Program²⁰ Summary²⁰</p>	<p>The symposium was co-organized by Ohya Laboratory of Waseda University; supported by The Institute of Image Electronics Engineers of Japan and Architectural Institute of Japan; collaborated by eight (8) organizations including The Nobel Sustainability Trust (NST).</p> <p>Dr. Nobel made a keynote speech concerning “Alternative energy”, followed by Mr. Tachi’s presentation on “Grand Design of National Spatial Development of Japan toward 2050”. The Indian representative proposed a collaborative project between India and Japan. Seven (7) presentations followed from the standpoint of sustainability relating to bio-technology, architecture, medical technology and smartization.</p>
Mar 18, 2016	<p>Regional Innovation Forum 2016 towards Grand Design of National Spatial Development (NABE Hall, Southern Tohoku General Hospital, Koriyama)</p> <p style="text-align: center;">Program¹⁸ Summary¹⁸</p>	<p>Southern TOHOKU Research Institute for Neuroscience invited Dr. M. Nobel, and held the Forum. TeFFA assisted its operation.</p> <p>In the Forum, we discussed on promotion of international technology exchange between Japan and India and collaboration concerning regional innovation, As a result, Dr. Michael Nobel, Mr. Rajinder Kumar Kaura, Chairperson of the Solar Energy Society of India, and Mr. Hiroshi Kato, Chairperson of TeFFA signed Memorandum of Understanding, which describes their intention to start collaboration.</p>
Mar 16, 2016	<p>The 1st Academia-Industry Collaborative Meeting with Dr. Michael Nobel in Osaka (Osaka City University, Osaka)</p> <p style="text-align: center;">Program¹⁷ Summary¹⁷</p>	<p>Michael Nobel Laboratory at Osaka City University and TeFFA organized the meeting. At the 1st Meeting with Dr. M. Nobel, we proposed a Japan-India collaborative project, the Fukushima-Jabalpur Project, which assists reconstruction projects in Fukushima, and new energy projects in Jabalpur, India.</p>
Feb 5, 2016	<p>The 4th Workshop of University of Tsukuba Forum on Power Electronics Tomorrow (Tokyo Campus, University of Tsukuba)</p> <p style="text-align: center;">Program¹⁶ Summary¹⁶</p>	<p>The 4th workshop was held concerning GaN devices and their applications.</p> <p>Over 100 researchers from academia and industry were attended the workshop and discussed on GaN devices and their applications to inverters, power source equipment, etc., including comparison with SiC devices. A professor from University of Tsukuba presented properties of insulation film prepared by oxidation of SiC.</p>

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Oct 7, 2015	The 1 st China-Japan Collaborative Seminar on High-tech Business Development (Shibuya Campus, Japan University of Economics) Program^⑮ Summary^⑮	TeFFA cooperated with TAM Network, which operates businesses using new technologies, and organized a seminar concerning “High-tech Business Development” aiming at promoting technology exchange in the high-tech business sector between Japan and China. The discussion at the 1 st Collaborative Seminar covered “New Chitose Airport Expansion Project” and “Technology Development for the New Agriculture around the Airport”, and possibilities of a new business model creation by collaboration between Japan and China.
Sep 24, 2015	The 1 st China-Japan Collaborative Symposium on Advanced Medical Technologies (Stanford Center, Peking University) Program^⑭ Summary^⑭	China-Japan Collaborative Forum promotes technology exchange among universities, research institutes and medical institutes in the both countries based on the advanced technologies, under the cooperation of societies, governments and industries. Forum organized the 1 st Symposium on “Cancer Treatment by Particle Beam Therapy”, of which Japan has the most advanced technologies. A researcher at Peking University presented on Laser Plasma Ion Acceleration, and a doctor at Peking Center Hospital reported on Radiotherapy at the hospital. Japanese researchers and doctors presented the achievements and prospects of proton beam and heavy particle beam therapy in Japan.
July 10, 2015	The 3 rd Workshop of University of Tsukuba Forum on Power Electronics Tomorrow (Tokyo Campus, University of Tsukuba) Program^⑬ Summary^⑬	The 3 rd workshop was held concerning SiC wafer, device applications, especially to electric railroad cars. Over 100 researchers from academia and industry were attended the workshop and discussed on SiC-MOSFET applications to inverters, new type switches, etc. In regard to SiC single crystal manufacturing, the latest sublimation-recrystallization process was presented.
May 21, 2015	The 4 th Michael Nobel Sustainable Technology Symposium (Shibuya Campus, Japan University of Economics) Program^⑫ Summary^⑫	The 4 th Michael Nobel Sustainable Technology Symposium (former Energy Technology Symposium) took place covering the agenda “How environment-friendly cars contribute to a reduction in the CO2 level”. A MoU (Memorandum of understanding) on collaboration for the development of those vehicles was agreed by the panelists on the individual basis at the end of the panel discussion.

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Apr 22, 2015	TeFFA Workshop on Advanced Electric Power Technology (Crowne Plaza Hotel, Beijing) Summary⑪	Opening ceremony of Zhuhai Science Park was held in Beijing with more than fifty attendants from governments and industries. TeFFA took opportunity to provide a workshop on electric power technology based on the advanced Japanese R&D, in which Chinese participants have strong interest.
Dec 5, 2014	The 2 nd Workshop of University of Tsukuba Forum on Power Electronics Tomorrow (Tokyo Campus, University of Tsukuba) Program⑩ Summary⑩	The 2 nd workshop was held concerning SiC device applications, following the topic of the 1 st one. Over 80 researchers from academia and industry were attended the workshop and discussed on power electronics devices, especially on auto- mobile and power grid application. Prof. Umeda of Univ. of Tsukuba gave a lecture on the analysis of SiC crystal defects by ESR method. NEDO person presented its projects on Energy Saving Technologies.
Nov 12, 2014	Nobel Prize and Scientific and Technological Innovation (Beijing) Program⑨ Summary⑨	Dr. Peng Liu, Senior Adviser of TeFFA, promoted to organize “Nobel Prize and Scientific and Technological Innovation Forum” in Beijing. More than 80 participants from Chinese governments, academia and industry were attended the forum. Lots of media agencies also gathered at the forum. Interview to Dr. Nobel by China Xinhua News Net was held on November 13.
Oct 20, 2014	Visit to Universiti Teknikal Malaysia Melaka Summary⑧	TeFFA members visited Malacca Technical University. More than 10 faculties including Prof. Mohd Rizal, Dean of Faculty of Manufacturing Engineering, were participated in the meeting with TeFFA, and discussed on the possibilities of collaboration especially concerning renewable energy research in Malaysia.
Oct 1, 2014	The 3 rd Michael Nobel Energy Technology Symposium (Shibuya Campus, Japan University of Economics) Program⑦ Summary⑦	TeFFA has proposed a concept of Asia Energy Network (AEN). In order to promote the concept, we discussed on EV, Smart grid, etc. suitable in Asia. Dr. Nobel was attended via Skype from Jamaica, and Mr. Kumar from Delhi. Prof. Molinas of Norwegian Univ. of S&T reported recent status of renewable energies in Nordic countries. Demonstration projects on smart community were reported from Japanese attendants, especially of Yokohama and Osaka.

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Jun 27, 2014	The 1 st Workshop of University of Tsukuba Forum on Power Electronics Tomorrow (Tokyo Campus, University of Tsukuba) Program⑥ Summary⑥	TeFFA organized a forum on power electronics technology collaborating with University of Tsukuba. The 1 st workshop was held concerning topic of SiC devices, cutting-edge power electronics devices. Over 100 researchers from academia and industry were attended the workshop and discussed on the hottest topic of power electronics devices.
Oct 14-16 2013	Beijing visit	Dr. Peng Liu invited Kunitomo and Hirai to Beijing. Prof. Kumai was visiting Beijing in order to attend the international conference of ACAA-2013, Asian Conference on Aluminum Alloys. Together with Prof. Kumai, TeFFA exchanged information with engineers of Chinese aluminum industry.
Oct 9, 2013	Workshop on Aluminum Technologies (Ookayama Campus, Tokyo Tech) Program⑤	Delegation of a Chinese aluminum manufacture visited Tokyo Tech. TeFFA organized a workshop on Tokyo Tech's technologies, including Aluminum technology, Solar thermal technology, Bio-sensor technology and Power electronics technology, looking at the future collaboration.
Sep 2, 2013	The 2 nd Michael Nobel Energy Technology Symposium (Gotland Campus, Upsala Univ., Sweden) Program④	Sweden is a mother country of Dr. Nobel. Wind power generation is the main research target among renewable energy sources in Sweden. TeFFA exchanged information on latest renewable energy technologies with researchers at the university.
Aug 22, 2013	The 1 st Meeting for India-Japan EV Study Society (246 Hall, Japan Univ. of Economics) Program③ Summary③	TeFFA provided a platform for creating new projects on EV development in India. Mr. Kumar, Vice-chairman of India Solar Energy Association; CEO of Bergen Group, was attended. Prof. Hirano of Kanagawa Institute of Technology, Mr. Koma of President of Green Road Motors (EV venture) presented their recent achievements.
Jul 1, 2013	The 1 st TeFFA Workshop Summary②	A few members of TeFFA presented their fields of expertise in order to exchange information among members. Attendants discussed on TeFFA's operation plan and management.
Feb 21, 2013	The 1 st Michael Nobel Energy Technology Symposium (Ookayama Campus, Tokyo Tech) Program① Summary①	TeFFA proposed a concept of Asia Energy Network (AEN), all participants were discussed on the possibility of the concept. Symposium was organized by Dr. Nobel, Guest Professor of Tokyo Tech, and co-organized by Delhi Technological University (DTU), Rajiv Gandhi Prouyogiki Vishwavidyalay, (RGPV).

		From India, Prof. Sharma, vice-chancellor of DTU and Mr. Kumar, Vice-chairman of Indian Solar Energy Association, were attended.
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