

Summary of the Technical Sessions

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The Technical Sessions

- Held from September 29th – October 2nd, 2020
- To understand the current R&D status and discuss the possibilities for international collaboration on the four selected themes
 - ✓ Renewable energy
 - ✓ Next generation energy management system with batteries
 - ✓ Hydrogen
 - ✓ Carbon capture, utilization and storage (CCUS)
- Experts' presentations (pre-recorded video available in advance on YouTube RD20 channel) and live panel discussions (using Cisco Webex Events)
 - ✓ Virtual conference having Japanese session moderators and panelists onsite at the main venue (AIST Tokyo Waterfront)

Theme 1: Renewable Energy

- September 29th 18:00—19:30 (JST, UTC+9)
- Registered participants: 1,017, Peak view of live panel discussion: 274

- Moderator



Prof. MATSUMOTO Mayumi
(The University of Tokyo)

- Co-chairs



Dr. Christian Thiel
(JRC)



Dr. KONDO Michio
(AIST)

- Speakers



Dr. Dolf Gielen
(IRENA)



Prof. Henry Snaithe
(University of Oxford)



Dr. Stefan Nowak
(IEA PVPS)



Dr. Tony Sample
(JRC)

Discussion points of Theme 1 (Renewable Energy)

- Main source of power in the future
- Revitalize the economy for a post COVID-19 recovery
- R&D challenges and emerging technologies



- Policy and financial supports for a long-term market growth
- Information/knowledge exchange and standards development facilitation in consideration of intellectual properties

Theme 2: Next Generation

Energy Management System (EMS) with Batteries

- September 30th 12:00—13:30 (JST, UTC+9)
- Registered participants: 1,017, Peak view of live panel discussion: 250

- Moderator



Dr. SAKAEBE Hikari
(AIST)

- Co-chairs



Dr. William Tumas
(NREL)



Dr. KONDO Michio
(AIST)

- Speakers



Dr. YOSHINO Akira
(AIST)



Dr. Anthony Burrell
(NREL)



Prof. Zhi Sun
(CAS)



Dr. Jinghua Guo
(LBNL)

Discussion points of Theme 2 (Next Generation EMS with batteries)



- Importance of EMS for high-level penetration of renewable energy
- Durability and life cycle management indispensable for EMS batteries

- R&Ds and practical applications of batteries in EMS
- Overcoming intellectual property barriers necessary for strengthening international collaboration



Theme 3: Hydrogen

- October 1st 20:00—21:30 (JST, UTC+9)
- Registered participants: 1,109, Peak view of live panel discussion: 245

- Moderator



Mr. Martin Tengler
(BloombergNEF)

- Co-chairs



Dr. Florence Lefebvre-Joud
(CEA)



Dr. KONDO Michio
(AIST)

- Speakers



Dr. YABE Akira
(NEDO)



Dr. Christopher Hebling
(Fh-ISE)



Dr. Julie Mougín
(CEA)



Dr. NANBA Tetsuya
(AIST)

Discussion points of Theme 3 (Hydrogen)

- Promising clean energy carrier, technologies in practical use
- Importance of cost reduction in hydrogen production/transport/storage



- International collaboration necessary – from hydrogen basic research to industrial demonstration
- Harmonization of regulation and standardization important for the global hydrogen value chain establishment

Theme 4: CCUS

- October 2nd 20:00—21:30 (JST, UTC+9)
- Registered participants: 1,047, Peak view of live panel discussion: 199

- Moderator



Dr. NISHIO Masahiro
(AIST)

- Co-chairs



Dr. David Harris
(CSIRO)



Dr. KONDO Michio
(AIST)

- Speakers



Dr. Paul Feron
(CSIRO)



Dr. SAKANISHI Kinya
(AIST)



Prof. Jorge Gascon
(KAUST)



Dr. TAKAGI Hideyuki
(AIST)

Discussion points of Theme 4 (CCUS)



- Indispensable for a zero-emission society
- Large amount of hydrogen required for CCU
→ the total system and infrastructure including clean hydrogen supply chain indispensable

- Importance of long-term roadmap for CCUS technology development and deployment
- Global collaborations among international entities, industry-academia-government required for technology integration to realize CCUS products value chain



Thank you very much to
all the contributors to the technical session
for the fruitful discussions!