~JSAP-MRS Joint symposium~

New direction of perovskite solar cells
ペロブスカイト太陽電池の新展開

Date : 2024. September. 16th (Monday) 9:00~18:30
Place : C41 (Hotel Nikko 4F)

Metal halide perovskite solar cells have been investigated around the world toward practical application. However, it is necessary to expand into the market dominated by silicon solar cells. To take advantage of the features of perovskite solar cells, it is necessary to establish large-area technology by understanding crystal growth and the higher efficient and durable perovskite solar cells including Sn perovskite and introduction of 2D perovskite are desired. We will hold a joint symposium with the Materials Research Society (MRS). We would like to invite cutting-edge researchers of perovskite solar cells in the world, and to discuss new directions in perovskite solar cell research.

	Speaker	Title
9:00-9:15	Tsunenobu Kimoto (JSAP president) Takao Someya (MRS president) Todd M. Osman(MRS Executive Director)	Greetings
9:15-9:45	Makoto Konagai (Tokyo City Univ.) Celebrating receiving the Order of the Sacred Treasure, Gold Rays with Neck Ribbon	Challenges and perspectives of perovskite solar cells -Lessons from 50 years of thin film solar cell development
9:45-10:15	Reinhold H. Dauskardt (Stanford Univ.)	Open-air spray-plasma manufacturing of large-area perovskite solar cells and modules
10:15-10:45	Hiroshi Segawa (Univ. of Tokyo)	Technological advances of perovskite solar cells and modules
11:00-11:30	Kenneth Graham (Univ. of Kentucky)	Stability of tin halide perovskites - From additives through two-dimensional materials
11:30-12:00	Shuzi Hayase (Univ. of Electro-Comm.)	Perovskite solar cells consisting of tin - Improvement of efficiency and stability
Lunch		
13:30-14:00	Shuxia Tao (Eindhoven Univ. of Tech.)	Materials theory of halide perovskites: defect and chirality
14:00-14:30	Tetsuhiko Miyadera (AIST)	Crystal growth in perovskite solar cells
14:30-15:00	Somin Park (National Univ. of Singapore)	Molecular engineering of interfaces for efficient and stable perovskite solar cells
15:15-15:45	Yuko Takeoka (Sophia Univ.)	Structural control of Pb or Sn-based 2D perovskite compounds
15:45-16:15	Enzheng Shi (Westlake Univ.)	Two-dimensional (2D) tin halide perovskite semiconductors for lasing

Oral session (15 min)
16:30-16:45 16p-C41-6 Svrcek Vladimir (AIST)
16:45-17:00 16p-C41-7 (P)Abduheber Mirzehmet (AIST)]
17:00-17:15 16p-C41-8 (M2)Md. Faiaad Rahman (BUET)
17:15-17:30 16p-C41-9 Yutaka Matsuo (Nagoya Univ.)

17:45-18:00 16p-C41-10 Qing Wang (Kyushu Univ.)
18:00-18:15 16p-C41-11 (PC)Ajay Kumar Baranwal (UEC)
18:15-18:30 16p-C41-12 (PC)Shahrir Razey Sahamir(UEC)

Representative of organizer
Qing Shen(UEC, JSAP),
Letian Dou（Purdue University, MRS）

Organizers
Kazuhiro Marumoto（Univ. of Tsukuba）
Makoto Karakawa（Kanazawa Univ.）
Atsushi Kogo（AIST）
Masatoshi Yanagida（NIMS）

Peccell *Specializing in printable solar cells*

Peccell Technologies provides materials and equipment to support R&Ds of perovskite solar cells. Our products are developed directly by the inventors of perovskite solar cells (Dr. Miyasaka's group) and his collaborators.

Transparent electrode substrates

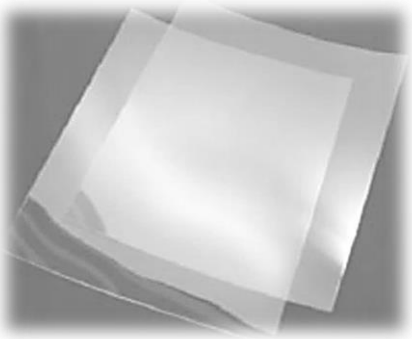
✓ **FTO glass substrate**: thickness 1.1mm (10cm×15cm), resistance <10Ω/ sq.

✓ **ITO-PET plastic film*:** thickness 125 μm, transmittance >80%, resistance 15Ω/ sq.

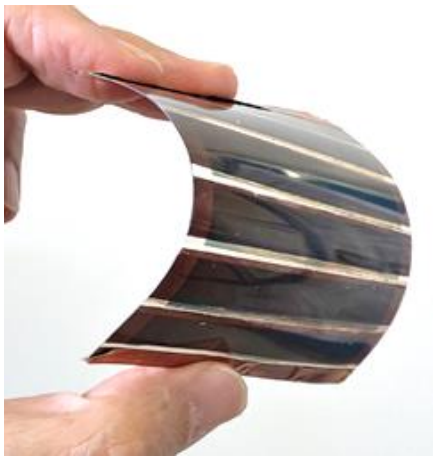
We supply A4-size Sheet or Roll of 30~50 cm (width)× 20~100 m (length)

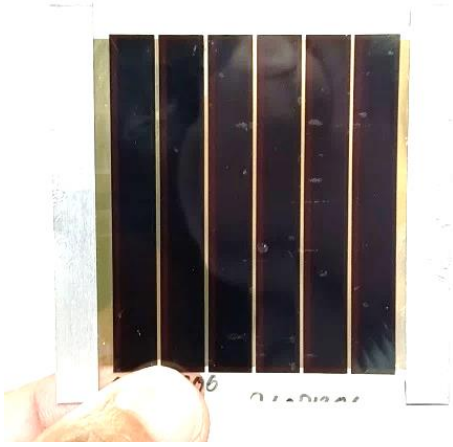
*Perovskite solar cell using our ITO-PET film achieves PCE>21%

(Miyasaka, et al. *J. Mater. Chem. A*, 2020)



ITO-PET film cut from roll product (right)





Plastic film perovskite solar cell printed by inkjet printer (see the back page)

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