Realization of next-generation film-type solar cells with low-cost, long life, and high efficiency for GX Innovation

Technology

Commercialization Promotion Organization Vision Incubate Co., Ltd.

Principal Investigator Kanazawa University Professor TAIMA, Tetsuya

Our two innovative technologies overcome key challenges and enable the development of next generation flexible perovskite solar cells (PSCs)

Innovative Technology 1: Ionic-liquid Addition Technology

① Stability (Lifetime)

Several hours of durability in ambient air

High stability of over 6000 hours without sealing

② Manufacturing Cost

Competitor's face high manufacturing costs due to the use of expensive sealing films

Simple sealing reduces costs

Innovative Technology 2: Bonding Technology

③ Coating Technology

Unestablished technology for neatly coating large-area films

Joint development of equipment with REIKO Co., Ltd.

④ Power Conversion Efficiency

Single-junction flexible PSCs reach up to 15% efficiency

Over 30% efficiency is possible in tandem solar cells

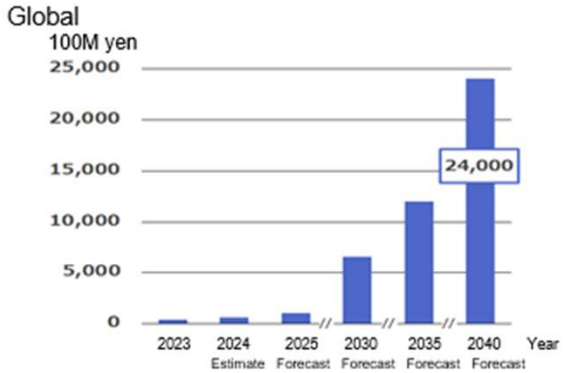
Professor, Nanomaterials Research Institute, Kanazawa University

TAIMA, Tetsuya Ph.D.

Unit leader, Study on Ionic-liquid Addition Technology

- FY2023 37 billion yen
- FY2040 2.4 trillion yen

Growth potential



Perovskite Solar Cell Market Size

Expected establishment date: FY 2026

Target market: Global, Domestic