

Background Publications

NIST Grand Challenges for Advanced Photovoltaic Technologies and Measurements
Denver, Colorado
May 11-12, 2010

The following publications provide a range of information about photovoltaic (PV) research and development, measurement, standards, and the four PV topics.

General Publications

Technology Action Plan: Solar Energy. Major Economies Forum. December 2009. 132 pages
Outline of barriers and actions to accelerate development and deployment of solar technology.
<http://www.majoreconomiesforum.org/images/stories/documents/MEF%20Solar%20TAP%2013Dec2009.pdf>

PV Status Report 2009. European Union, Joint Research Centre. August 2009. 118 pages.
<http://re.jrc.ec.europa.eu/refsys/pdf/PV-Report2009.pdf>

Photovoltaic-Reliability R&D Toward a Solar-Powered World. NREL. August 2009. 15 pages
Survey of current DOE research projects and reliability issues.
<http://www.nrel.gov/docs/fy09osti/44886.pdf>

National Solar Technology Roadmap: Nano-Architecture PV (DRAFT). NREL. June 2007. 6 pages
Brief technology overview and R&D needs.
<http://www1.eere.energy.gov/solar/pdfs/41742.pdf>

Wafer-based Crystalline Silicon PV

National Solar Technology Roadmap: Wafer-Silicon PV (DRAFT). NREL. June 2007. 6 pages
Brief technology overview and R&D needs.
<http://www1.eere.energy.gov/solar/pdfs/41733.pdf>

Amorphous Silicon and Polycrystalline Thin Film PV

National Solar Technology Roadmap: CdTe PV (DRAFT). NREL. June 2007. 6 pages
Brief technology overview and R&D needs.
<http://www1.eere.energy.gov/solar/pdfs/41736.pdf>

National Solar Technology Roadmap: CIGS PV (DRAFT). NREL. June 2007. 6 pages
Brief technology overview and R&D needs.
<http://www1.eere.energy.gov/solar/pdfs/41737.pdf>

National Solar Technology Roadmap: Film-Silicon PV (DRAFT). NREL. June 2007. 7 pages
Brief technology overview and R&D needs.
<http://www1.eere.energy.gov/solar/pdfs/41734.pdf>

III-V Multi-junction Cells

Opportunities and Challenges for Development of a Mature Concentrating Photovoltaic Power Industry. NREL. November 2009. 32 pages
Summary of concentrating PV (CPV) industry status and challenges.
<http://www.nrel.gov/pv/pdfs/43208.pdf>

National Solar Technology Roadmap: Concentrator PV (DRAFT). NREL. June 2007. 5 pages
Brief technology overview and R&D needs.
<http://www1.eere.energy.gov/solar/pdfs/41735.pdf>

Excitonic Cells

National Solar Technology Roadmap: Organic PV (DRAFT). NREL. June 2007. 5 pages

Brief technology overview and R&D needs.

<http://www1.eere.energy.gov/solar/pdfs/41738.pdf>

National Solar Technology Roadmap: Sensitized Solar Cells (DRAFT). NREL. June 2007. 6 pages

Brief technology overview and R&D needs.

<http://www1.eere.energy.gov/solar/pdfs/41739.pdf>