

ISSN 1861-2741 74714 www.sunwindenergy.com 9,50 € · International issue

P ORY
20 OCT 2009

**PV World Map:** silicon and wafer producers

Tandems Increase efficiency

#### **BIOENERGY**

Short rotation for fast-growing wood

#### **SOLAR THERMAL**

Building codes: an instrument for all continents

#### WIND ENERGY

Rotor blades: lightweight through carbon fibres

# Summit conference: preview 24th EU PVSEC

Visitors to the 24<sup>th</sup> EU PVSEC in Hamburg can look forward to an extensive programme with more than 288 plenary and specialist lectures as well as almost 1,000 poster presentations. The trade fair has also grown again with more than 800 exhibitors.

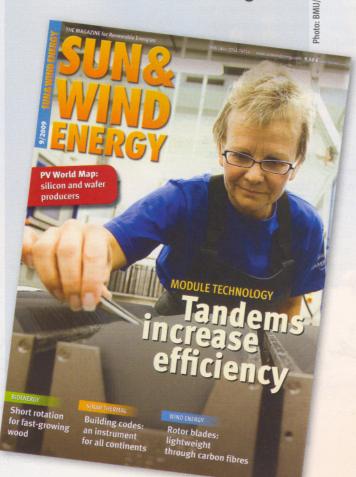


Photo: HMC/Michael Zapf

## Solar cells of the future: a wide spectrum

The PV industry and various research institutes are working on a host of innovative ideas aimed at making solar cells and modules more efficient and more affordable.

Page 126





### Coating specialists on the up

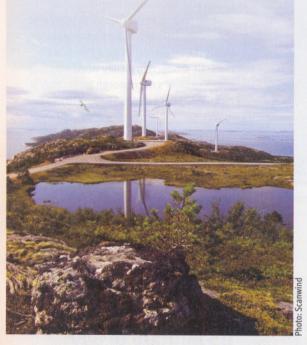
The companies Alanod, Bluetec and Tinox dominate the market for selective, blue absorber coatings. For many years, they have together been supplying some three-quarters of the material for selective solar collectors. Even so, more and more competitors are entering this field of business. And this year has been no exception.

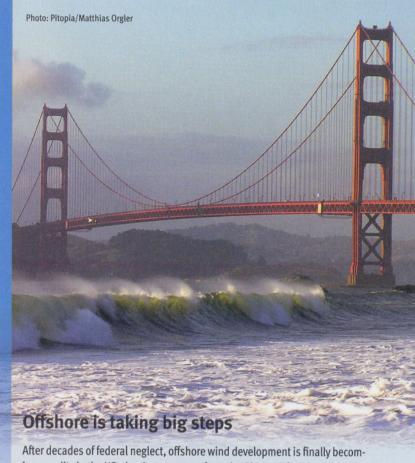
Page 82

## Sustainable Scandivia: searching for better conditions

Shortly before the United Nations Climate Change Conference in Copenhagen, Scandinavia's governments are becoming diligent in the introduction of new incentive laws. However, a glance behind the scenes reveals insecurities in the industry. The first companies are already slowing down their production or announcing a change of location.

Page 36





After decades of federal neglect, offshore wind development is finally becoming a reality in the US, thanks to support from the Obama Administration. But the installation of wind farms offshore is being planned in many European countries, too. S&WE gives an overview on

Pages 190, 198

#### **REVIEW**

- 6 International news
- 18 Incentive schemes worldwide
- 20 REFF West: a renewable energy revolution
- 24 Lowering bureaucratic hurdles in the EU
- 28 Micro-biogas plants for Tanzania
- 30 Energy Watch Group: oil at its peak
- 232 International fairs

#### **COUNTRY SPECIAL**

- 36 Sustainable Scandinavia
- 42 South Africa: wind power moves ahead

#### CSP

- 48 Fresnel collectors: lean power plant in Spain
- 52 Aora, Israel: make the desert bloom
- 56 Nevada Solar One: a new generation

#### SOLAR THERMAL

- 60 Building codes worldwide
- 76 Efficient: pre-insulated pipe systems
- 82 Coating specialists on the up
- 88 Rapid growth of the sector in Poland
- 94 Suppliers in India: a rising industry
- 98 Large-format collectors: solar thermal XL

#### SOLAR ENERGY

102 New glass concepts for thermal and PV

#### PHOTOVOLTAICS

- 108 World map of silicon and wafer producers
- 126 Solar cells of the future: a wide spectrum
- 132 ZnO sputtering for thin film production
- 136 UMSi: the eternal talent
- 142 Preview 24th EU PVSEC in Hamburg
- 166 New CPV technology from the US
- 168 Solar power economics in California
- 176 Sunpower: a new crystalline generation
- 182 Auto industry dicovers electric mobility
- 188 PV products

#### WIND ENERGY

- 190 Offshore in Europe: massive potential
- 198 Offshore USA: taking big steps
- 204 Rotor blades: strong through carbon fibre
- 208 Gearboxes: lots of secrecy, little trend
- 214 Egypt: wind power in the Land of Pyramids
- 218 France: providing clarity

#### BIOMASS

226 Short-rotation plantations for more energy

229 Preview Interpellets in Stuttgart

#### **DEPARTMENT**

- 219 Order a free copy
- 236 Directory
- 242 Preview and imprint



### Mirror of the international pellets market

The southern German city of Stuttgart will be the meeting place of the European pellets industry from October 6 to 9. As in the previous year, the organizer is expecting many foreign guests for the Pellets Industry Forum and Interpellets Trade Fair. Page 229