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Solgløtt

Nyhetsbrev fra
Norsk solenergiforening
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DNB's innovasjonspris til Norwegian Silicon Refinery

Forskningsbedriften Norwegian Silicon Refinery AS (NSR) vant 10. august den prestisjetunge prisen til DnB NOR på 250.000 kroner. Det var noe i underkant av 400 søkere til prisen.

Jan Reidar Stubergh (JRS) som er oppfinner og daglig leder av NSR er ansatt som forsker ved Høgskolen i Oslo, avdeling for ingeniørutdanning. Han har utviklet en prosess som skal produsere solcellesilisium direkte ved elektrolyse, uavhengig av "silgrain" silisium som er råstoffet til hovedproduktet elektronikk silisium og biproduktet solcellesilisium (feedstock) i Siemensprosessen.

JRS-prosessen er meget kostnadsbesparende da den ikke innebærer noen gassfasesteg som i Siemensprosessen, og der feedstock utgjør kun 10 % av elektronikkilisiumet.



En annen fordel ved prosessen er at den kan fremstille solcellesilisium i store volumer nær tilsvarende som for aluminium og helt uavhengig av markedet for et annet hovedprodukt. Potensialet (markedet) for solcellesilisium er enormt. Ved å sammenligne vannkraft i Norge som utgjør ca. 120 TWh/år så tilsvarer dette et areal

dekt av solceller tilsvarende halve Oslo by (130 km²). Prosessen kan også fremstille et biprodukt som gjør at strømmen fra solcellene med fordel kan brukes til hydrogen og oksygenproduksjon fra vann.

JRS-prosessen er siden 1985 oppskalert tre ganger, siste gang i samarbeid med SINTEF i Trondheim og Institutt for energiteknikk (IFE) på Kjeller. Nå ønskes investorer slik at vi kan oppskalere til et minste produksjons- og testanlegg. Et slikt anlegg vil totalt koste ca. 50 mill kroner.

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An energy independent United States of America?

Presidential candidate John Kerry has outlined an [energy plan](#) which will "put America on the path to energy independence" - with the help of renewable energy.

Kerry's plan provides a 10 year, \$30 billion US-Dollar budget for alternative and clean technologies and aims to create several thousand new jobs.

According to latest polls, the democratic presidential candidate John Kerry is, with 48%, ahead of US-President George W. Bush (45%).

In California, Governor Arnold Schwarzenegger aims to equip 50% of new buildings with photovoltaic systems by 2005 - as intended with his environmental campaign.

Schwarzenegger may however fall short of this goal, unless he adopts the new "Million Solar

Homes" proposal made by the [California Environmental Protection Agency](#).

Lettere å velge riktig solvarmesystem

Det är svårt för potentiella köpare av solvärmeanläggningar att veta vilka de ska välja. Chris Bales har utvecklat en metod för att ta fram nyckeltal som kan hjälpa dem att bedöma både systemens och lagrens egenskaper.

Hans metod går ut på att testa hela systemet i laboratorium med simulerad solfångare under åtta dagar. Från mätningarna kan en rad olika nyckeltal för systemet och lagret tas fram, bland annat för solvärmeandel och behov av tillsatsvärme. Dessa är representativa för hela året för det klimat och hustyp som används i testet och kan därför användas för att ranka system.

Arbetet med avhandlingen "**Combitest - a new test method for stores used in solar combisystems**" har ingått i ett internationellt samarbete kring solvarmesystem inom International Energy Agency och testas och vidareutvecklas vid provningsinstitut i Schweiz och Holland. Forskningen har finansierats av FORMAS och Energimyndigheten. Mer information:

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Informationskatalog for solvarmeprodukter

Norsk solenergiforening skal på oppdrag fra Enova SF opprette en nettbasert informationskatalog over ulike leverandører av solvarme og deres produkter. Katalogen skal bidra til å fremme utnyttelsen av potensialet for bruk av solvarme. Informasjonen vil bli fritt tilgjengelig på nettet og vil bli årlig oppdatert for å gi mest mulig korrekt informasjon.

Solstrøm på bensinstasjon

SEI alum Miguel Silva just completed a 30.4 kilowatt PV array with the company he works with, [Sustainable Technologies](#). The array is mounted on the roof canopy of a privately owned Shell Service Station at the corner of Oak and Divisadero Streets in San Francisco, CA. The array of 216 Kyocera

modules is expected to offset approximately 70% of the current electrical needs at the station, which employs nearly one hundred people to pump fuel, staff two convenience shops, and operate the high volume "Touchless" car washing facility.

The finished system has an installed cost of approximately \$280,000 of which \$132,295 (or \$4.50/watt) will be reimbursed to the owner under [PG&E's Self-Generation Incentive Program](#).

The Shell Station is expected to save an average of \$860 per month on their energy bill. Annual production is estimated to top 53,000 kilowatt-hours per year.

Source: solarenergy.org

Spania satser på solvarme

The worldwide biggest solar thermal large-scale power plants AndaSol-1 and AndaSol 2 in Andalusia will supply 180,000 people with electricity from 2006. The start of the construction of both 50MW parabolic trough power plants is planned for this year.

[Solar Millenium](#), the Erlangen based company in charge of this project, is using the nine Californian solar power plants in the Mojave desert as models. These plants produce half of the world's solar electricity and have already brought in 1.6 billion US-dollars in revenue.

Solar energy in Spain is now a trend. The [energy agency](#) (AGENCIA ENERGÉTICA MUNICIPAL DE PAMPLONA) in Pamplona for example can enforce the law prescribing that in new buildings at least 60% of required energy for warm water has to be produced using solar thermal energy. Other Spanish regions are interested in this legislation.

Source: Energie-Server.de



Commercial solar collector in Australian powerplant

The first commercial solar collector to be used in a conventional power plant produced its first hot water. The solar field with a nominal thermal capacity of 1,2 MW is the first Compact linear Fresnel Reflector (CLFR) constructed by Solar Heat and Power for Macquarie Generation, the operator of the coal fired station in the Hunter valley about 250 km northwest of Sydney, Australia. The CLFR collector field has a size of

approximately 60x30 m consist of several rows of flat mirrors, which concentrate the suns radiation to a fixed plane absorber installed 10 m above the field. In the absorber the sun light heats water and produces steam at temperatures of 285°C. This solar generated steam replaces steam turbine bleed steam otherwise used for the feed-water heating entering the coal fired boiler.

Schüco nytt bedriftsmedlem

Vi ønsker leverandøren Schüco velkommen som nytt bedriftsmedlem i Norsk Solenergiforening!

Schüco har utviklet solvarme- og solcellesystemer som kan integreres i såvel nye som eldre bygninger. Med utgangspunkt i Schücos kjente og veldokumenterte fasadeløsninger har vi utviklet systemer til fremtidens bygninger og energiløsninger.

Mer informasjon: www.schueco.no

Reduced cost for solar thermal

The global solar thermal industry has reached "substantial cost and price reductions" of 7 to 30% as a result of activities to promote large-scale procurement.

Source: REFOCUS

Solar thermal collectors displace billions of litres of oil

The world has installed more than 100 million square metres of solar thermal collectors, which are reducing CO₂ emissions by 18 megatonnes a year and displacing billions of litres of oil. The milestone was achieved in 2001, according to a report from International Energy Agency.

Source: REFOCUS

Solar PV / Thermal hybrid

A hybrid system, combining solar electricity (PV) and solar water heating in one integrated roof module was launched at Resource 04 Low Carbon Technology Show held in June in the UK. More information: www.pvsystems.com or www.imaginationsolar.com

Source: REFOCUS

Sales of solar thermal increase 25% in Europe

The market slump of 2002 for solar thermal sales in Europe has ended, with growth of 25% last year, according to the latest figures from the European Solar Thermal Industry Federation.

Sales are expected to increase by another 24% this year, it predicts, boosting the current installed capacity of 12 million square meters of glazed collectors. That level produces 5,000 GWh of renewable energy each year.

"Largely unnoticed by the public, solar thermal has grown to a point where it replaces significant amounts of conventional heating fuels such as oil and gas or electricity," says ESTIF president Ole Pilgaard. "And the potential is much higher."

Source: REFOCUS

EU presents future vision for Solar PV

The European Union has finished a public consultation session on the future of solar PV on the continent.

The Photovoltaic Technology Research Advisory Council (PV-TRAC) was launched in December 2003, by the European Commission to "contribute to a rapid development of a world-class, cost-competitive European PV for sustainable electricity production." The members include major European PV stakeholders, including the industry, construction sector, utilities and government agencies, and it released a vision report to discuss PV technology beyond 2030.

The report is intended to ensure that future policy direction is coordinated at national and European levels to enable PV to reach its full potential in the future energy mix, and it outlines the potential for PV and identifies major barriers hindering the uptake of solar technology and proposes a strategy to overcome those barriers "to ensure a breakthrough of PV and an increase in deployment in the Union and worldwide."

Source: REFOCUS

Foreningsaktiviteter

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