

Presentation of the Nanophotonics for Energy network

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How to boost energy efficiency to help curb climate change is a thorny scientific question that today's society must find answers to quickly. Photonics is set to be among the solutions. Photonics could thus help us design more efficient ways to convert electricity into light, and light into electricity, to meet our energy needs much more sustainably. Increasing the efficiency of light-matter interaction at the nanoscale, for example, could lead to important advances in the performance of both light-emitting and light-harvesting devices. With the sun sending to the Earth's surface, in less than an hour, an amount of solar energy equivalent to the energy consumed by the entire world population over a year, the potential for real solutions is huge. Starting in January 2010, the Nanophotonics for Energy Efficiency Network of Excellence (N4E) aims to promote nanophotonics research in energy-efficient applications by bringing together different nanophotonic laboratories and research groups across Europe. To date, 9 institutions in 6 European

countries are participating in the network, representing more than 130 scientists, engineers, technicians, and managers in the field. This is further enhanced by a comprehensive Advisory Board with participation of major companies, and an Associate Membership scheme open to all interested parties. With the view to speed up the development of disruptive approaches to lighting and solar cell technology, N4E fosters collaborations for the exchange of scientific knowledge and best practices and paves the way for the establishment of common research agendas. N4E organizes workshops and summer schools for young researchers and technicians to learn about scientific and technological issues and hone their communication, entrepreneurship, and intellectual property skills. Every 6 months, the N4E Network also offers seed funding for collaborative projects to investigate disruptive nanophotonics concepts toward increased energy efficiency.