

DIALOGUE BETWEEN PAOLO SCARONI AND ALAN J. HEEGER ON THE IMPORTANCE OF INNOVATION AND RESEARCH

P.S. Energy plays an increasingly central role in the development of the world economy and there is every reason to believe that this situation will remain unchanged for many decades to come. The challenge of the new millennium is to produce sufficient energy for the development of the planet while finding a way of protecting the delicate environmental balance. To respond to this challenge both industry and the world of science will have to combine forces to find new solutions. This is the philosophy behind the Eni Award, which continues a process begun with the Eni Italgas prize that you, Professor Heeger, won in 2006 for your work on polymer solar cells.

A.H. It was a source of great pride to win that award, as it was for many colleagues who received the award over the years. As you know, I have also had the privilege of being awarded a Nobel Prize in recognition for more than 30 years of work and, obviously, that made me very happy. But it was equally satisfying to receive a prize for research that I have done more recently.

P.S. I can't pretend that your words don't give me a great deal of satisfaction. The Eni Award was created precisely to provide an incentive for and to the spread research that is being conducted around the world on such delicate and crucial area such as energy and the environment.

A.H. The award certainly achieves these objectives. In my own case, for example, it was a significant recognition of the importance of photovoltaic technology and highlighted the opportunities for polymer solar cells in the field of alternative energy. I hope that it will be an incentive for my colleagues around the world to continue to contribute to our research. Cooperation could well prove to be the added value of the award and could help us to solve some of the problems to which we have still not found solutions.

P.S. Solar power is one of the most promising alternative sources of energy, even if traditional silicon-based solar panels are certainly not the final answer. Eni has identified solar energy as one of the renewable sources of energy on which to concentrate its research efforts in the context of an area that we have called Along with Petroleum. In

order to make the best of this commitment, we have dedicated the work of a specific institute, the Donegani Research Centre at Novara which has been re-named the “Centre for Research Into Non-Conventional Energies”. Technological innovation, both in the traditional energy sources that constitute our core business, and alternative and non-conventional sources, is an ever more important lever in creating value for our shareholders.

A.H. Initially, technologies develop slowly and then they take off. I think that with photovoltaic technology we are at the point where it is about to become very significant. One of the barriers is high cost. Consequently, if we can get the costs down with the use of polymer solar cells, it is possible to imagine a broad development for photovoltaic technology.

P.S. While we wait for truly innovative developments in the field of alternative energy, we have launched activities that aim to integrate fossil fuels with renewables to meet the world’s energy needs with the lowest possible environmental impact.

A.H. I think that is a very wise course. Naturally we will continue to use petroleum as a source of energy for many years. What we hope is that solar energy will have a growing importance. With the expansion of energy from photovoltaic technology we can move to a situation where oil is used for chemicals, in the construction of new plastic materials and to create pharmaceuticals. Such products, which derive from oil, are extremely important for society, consequently there are many good reasons why we shouldn’t eliminate such a versatile raw material. We need to develop new energy sources above all because the energy demand of the world is growing constantly. Nevertheless, I believe it is important to learn to save energy and we need to become much more careful and more frugal in our use of energy.

P.S. Quite so! If we consider energy saving as an alternative source, it is the most powerful we have available. Even by making modest changes to our energy consuming habits - for example by choosing more efficient cars, turning down the heating in winter and air conditioning in summer and in general making a more rational use of energy - we could save enormous quantities of hydrocarbons, with enormous benefits for the environment.

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Nobel Prize for Chemistry 2000