

Research – A Commitment to the Next Generation

■ **Conversion** – The figures are impressive: the Sun beams 13.7 quintillion watts down onto our planet every hour. That is as much as the entire world population presently consumes in a year. If we could manage to divert only a fraction for human consumption, we would have solved one of the most important problems looming in the future. Simply optimizing the technologies we already have will not bring us any closer to this objective. That is why a number of Max Planck institutes are delving deeply into this subject. You will find a brief extract of their activities in this issue's Focus: for instance, the research being conducted at the Max Planck Institute of Plasma Physics, which aims to replicate the solar oven here on Earth. Or the possibility of using plants and of learning from them, whether by recycling plant waste or through artificial photosynthesis. However, the work being carried out at our institutes goes much further. Max Planck scientists are, for example, developing improved technologies for fuel cells, investigating possible ways of storing hydrogen more safely and more economically in terms of space, and even laying the foundations for a new super-battery that lasts five times as long as conventional rechargeables. Despite all of these efforts, there is unlikely to be an ideal solution. But the more options we develop, the greater are the chances that we can meet mankind's burgeoning energy needs in the future in a manner that is compatible with the environment.

■ **Revision** – Our society is growing steadily older – that much is old news. Thus far, however, both politics and business have been slow to respond to this phenomenon. Nevertheless, demographic research is revealing ideas and opportunities that would enable us to adapt life in Germany to meet these changing circumstances. James Vaupel, Director at the Max Planck Institute for Demographic Research, describes in our Viewpoint how the potential presented by



Peter Gruss, President of the Max Planck Society

the over-50 generation could be better used. Contrary to current prejudices, older people are by no means less productive or employable than their younger colleagues. There are many Max Planck scientists who prove the point, chief among them being last year's winner of the Nobel Prize for Physics, Theodor Hänsch: Hänsch achieved his prize-winning breakthrough in his late fifties. He is now 64, and bubbling over with ideas. It is, frankly, absurd that government service regulations in Germany should prevent him from continuing to work beyond his 68th birthday. It is also contrary to the country's

interests, given that professors who are generally put out to grass in Germany at the age of 65 regularly receive lucrative offers from the US, where they are able to successfully continue with their research. That is why Max Planck Society Directors have long been given the opportunity to continue their work in an emeritus capacity – albeit with limited funds. It would be far better, however, if the existing rules were to be relaxed.

■ **Implementation** – The Max Planck Society is renowned worldwide for its basic research – its research into the fundamental laws of nature and mankind. Despite this, the application of our findings has always been a matter of great concern to us. Of course, not every result leads directly to a patent. Nevertheless, there are more entrepreneurs among the ranks of scientists than one might generally assume. David Audretsch, Director at the Max Planck Institute of Economics, highlighted this in a recent study. The results of this study are included in Max Planck News. Max Planck scientists are not only making sure that the results of their theoretical research are put into practice; they are also supporting practical implementation with theory. And their findings, in turn, are likely to be of great value to both politics and industry.

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