

HORIZONS



When *Nature* asked a group of experts to offer their visions of the future, we were aware that such a project can have its pitfalls. Experts can get things drastically wrong — although, as Arthur C. Clarke noted, this usually occurs when they assert what is *not* possible. When they say what is possible, they can be inspiringly right.

With such inspiration in mind, these five Horizons articles offer a sense of what our authors believe should happen over the next few years. The collection is in no way comprehensive — we simply wanted to deliver a mix of fundamental and applied science, with the writers articulating their unrefereed agendas for their disciplines.

So it is that one article examines the advantages of a systems approach to researching human ageing. In a similar spirit, other authors show how we might develop the batteries to power the computers and transport of the future. The complex interactions of light and of matter in electronic structures and their potential to revolutionize future computation and communication are also explained. Another article shows how fossil evidence, genomic sequencing and molecular developmental biology should reveal more about how we humans came to evolve into what we are. And the description of the next generation of the web, in which computers can make as much use of information as humans can, offers a truly collaborative vision for research empowerment.

I hope that these visions will inspire and maybe even encourage some to adjust their research ambitions as a result. Inspired by them ourselves, we'll be publishing more Horizons in the future.

Philip Campbell, Editor-in-Chief, *Nature*

644 A systematic look at an old problem

T. B. L. Kirkwood

648 Chemistry for everyone

P. Murray-Rust

652 Building better batteries

M. Armand and J.-M. Tarascon

658 Evolution of anatomy and gene control

G. Koentges

664 Wiring up quantum systems

R. J. Schoelkopf and S. M. Girvin

A. BARKER/ALAMY