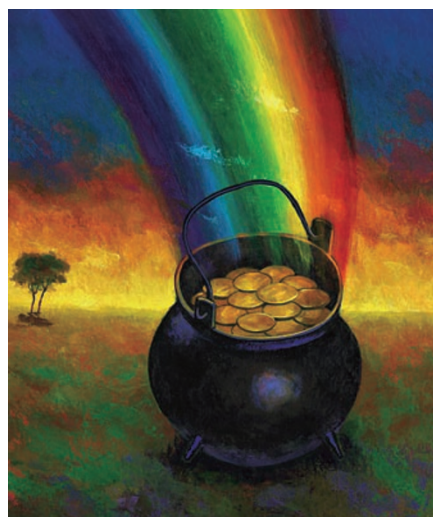


# A promising future

The jobs market is looking up and scientists with a sound grounding in photonics are in increasing demand. With such a choice of career directions, it is worth taking a moment to reflect on where you want to be.

Choosing to leave the academic life behind, as any editor of a *Nature* journal will testify, often involves a long period of intense soul-searching. Although many of the skills that are honed during postgraduate studies and postdoctoral research, be it the ability to simplify complex ideas or work as part of an international team, are invaluable in all fields of work, there can also be a sense of loss that the specific skills that have been learnt will never be used again. During the years of research spent in a university lab working towards a PhD, it is possible to become the foremost expert on a topic, although it may only be within a very small area of expertise — the theoretical intricacies of a particular phenomenon or the nuances of a specific sample-preparation technique, for example. But life within a university is not for everyone. When academics do make the decision to break away, the first questions they often ask themselves are: Where will I be most useful? Where will I make the most of my unique skills and knowledge? The answers are seldom obvious.

With a background in photonics, however, you do at least have the advantage of numerous options. Perhaps more than any other research theme in the physical sciences, photonics has reached an advanced level of commercialization, and importantly profitability, which means that those with the right technical know-how are eagerly welcomed into the 'real world'. The number of optics start-up companies continues to grow and the multinational electronic manufacturers are enjoying a resurgence after the 'dot com' bubble burst. Each of these types of company offers a different surrounding in which to continue a research career; their aims and



objectives can vary dramatically, offering a range of challenges and rewards and, crucially, they are keen to use the knowledge and experience acquired during time spent at university. And the roles are not just limited to the optics lab. Companies are increasingly looking for recruits with a real understanding of the science underlying their products to act as the link between research and development teams and the rest of the company and its customers.

The possibilities are presented on page 429 of this issue by Robert Bradley from The Photonics Group, a recruiting firm that searches for engineers on behalf of companies that design and manufacture optical, electro-optic and laser systems. And he certainly paints a promising picture, with demand for suitably trained scientists out-stripping supply. He takes the example of the popular online CV database [www.monster.com](http://www.monster.com), which saw a 34% increase in the number of optics

employment opportunities in 2006, with further improvements anticipated this year. At present, scientists with expertise in optical component manufacturing and thin-film processing are in particularly strong demand, and it is expected that the drive to apply photonics technology to the energy sector will have a significant impact in the coming years. Bradley also highlights a number of other areas where scientists with the right skills are eagerly sought: optical data storage, defence and display technology to name just a few.

But how do we choose the best direction to progress? We can all agree with Bradley's sentiment that "being happy with the job you get is critical." But it isn't always this easy. There is always the worry that whatever choice you make might take you down a path of no return, blocking you from a return to the academic fold. But this is not necessarily the case. Many university departments are turning to those with an impressive industrial track record, when it comes to filling professorships and group-leader positions, particularly in the fields of optics and photonics. Universities are now eager to make the most of the technologies developed in their labs and are taking the notion of spin-offs very seriously. Those with the business acumen necessary to make ideas a success in a competitive market are increasingly valuable within university departments.

To reiterate the conclusions of Robert Bradley, "All in all, it is a good time to be looking for an optics-related job." And if you really want to use the knowledge obtained during years of research but are aching to escape the confines of the lab, then you could do much worse than become a journal editor.