Response

LENTE'S COMMENTS DO NOT REFLECT ALL THE benefits of the new science and technology policy introduced just a year and a half ago in Hungary, and it is really too early to fully assess the effects. The first grants under the new National Research and Development Program have only just been awarded. Lente is partially right: Although far-reaching reform has started in the faculty members' salary system, the same figures might appear on the face of many university paychecks. The words "start," "might," and "many" are important here.

A science and technology policy is complex and cannot be thoroughly evaluated by just one component, namely, faculty paychecks. The National Research and Development Program is designed to promote the spread of high-tech industrial research facilities all over Hungary; the rapid development of information infrastructure; the establishment of new universities from an old, fragmented system; and a tripling of the number of university students in about 5 years, to name a few of the goals.

Lente focuses on only one aspect: the university paycheck story. A new way of financing research and higher education is under way; I mean new in Hungary and in the region, but industrialized countries have been using it for 40 to 50 years. We have now begun on an "industrial scale" the research grant system. The National Research and Development Program, by doubling the competition-based research funds, brings a new competitive approach and philosophy to the general research grant practice. Through writing project proposals, which are peer reviewed, and competing with others, sometimes from the same universities or even from the same departments, faculty who win grants will see their paychecks that are guaranteed from the "providing state" [i.e., the government (*1*)] increase. Think of it—in 2 years budgetary support for research and development will be increased by 61% nominally (some 50% at real value).

There is a lot of "new money" which is targeted at strategic goals, concentrated to key research fields, and available through competition. All these changes are happening in the best interests of Hungarian science to prepare our researchers for the bright but tough realities of the near future, namely, full membership in the European Union. Hungary is already a full member in the Union's research and development programs, but our researchers' ability to be competitive in writing research applications and winning grants from the EU (for Hungary to be a net recipient instead of a net donor to the system) has wide implications for us far beyond the field of research and development.

ISTVÁN SZEMENYEI
Advisor on International Science and Technology Affairs, Ministry of Education, Hungary. E-mail: istvan.szemenyei@om.hu

References and Notes

1. The term "providing state" has connotations from the period of Hungary's socialist political system, which ended abruptly in 1990, that go beyond the term "government" as perceived within a democratic system.

Photocatalysts Sensitive to Visible Light

BECAUSE OF THE POTENTIAL APPLICATION TO the conversion of solar energy to chemical energy, the development of semiconductor photocatalysts that have high reactivity under visible light has received great attention. Asahi *et al.* report that TiO_2 becomes a photocatalyst that is sensitive to visible light when it is sputtered or heated in a N_2Ar mixture (Reports, "Visible-light photocatalysis in nitrogen-doped titanium oxides," 13 Jul., p. 269). They ascribe this result to the doping of TiO_2 with nitrogen (N doping).

A similar phenomenon, not mentioned by Asahi *et al.*, was reported 15 years ago. When

powdered TiO_2 is prepared by the hydrolysis of TiC_{14}, NH_4OH can be added to enhance precipitation as well as to obtain the anatase (crystallized) form. Calcination of the resultant precipitate leads to the formation of yellowish TiO_2 powder, which exhibits photocatalytic activity in the visible-light region (*1*). The NH_4OH treatment of TiO_2 powder prepared by the hydrolysis of Ti isopropoxide, followed by calcination, also leads to visible-light sensitization. This procedure was named NO_x doping, because NH_4OH would be oxidized to NO_x before it was involved in the formation of TiO_2. There would be no essential difference between N doping and NO_x doping.

SHINRI SATO
Catalysis Research Center, Hokkaido University, N11 W10, Sapporo 060–0811, Japan. E-mail: shinri@cat.hokudai.ac.jp

References and Notes
1. S. Sato, *Chem. Phys. Lett.* **123**, 126 (1986).

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NITROGEN DOPING AND NO_x DOPING OF A compound can be distinguished by the ionization states of N and conditions of the charge neutrality in the solid compound. In addition, the visible-light photocatalysis that Sato reported (*1*) disappears when the sample is heated at 500°C, whereas the samples we observed still exhibit significant visible-light photocatalysis even after annealing in air at 550°C. The detailed investigation of the N states in relation to the preparation processes will be required to clarify this matter.

R. ASAHI,* T. MORIKAWA, T. OHWAKI, K. AOKI, Y. TAGA
Toyota Central R&D Laboratories, Inc., Nagakute, Aichi 480-1192, Japan
*To whom correspondence should be addressed. E-mail: rasahi@mosk.tytlabs.co.jp

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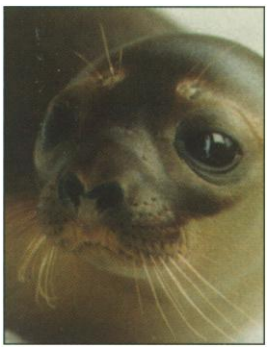
1. S. Sato, *Chem. Phys. Lett.* **123**, 126 (1986).

Wandering Hooded Seals

MARINE MAMMAL CONSERVATION AND rehabilitation organizations have been astounded at the number of hooded seals (*Cystophora cristata*) that were stranded or sighted last year down the western and eastern coasts of the North Atlantic. A species of the far north, hooded seals are distributed from Svalbard in the east to the Gulf of St. Lawrence in the west, giving birth in the spring on the drifting heavy pack ice in four main concentrations: near Jan Mayen Island (between Norway, Iceland, and Greenland), off Labrador and northeastern Newfoundland, in the Gulf of St. Lawrence, and in the Davis Strait (between Canada and Greenland) (*1*). They have the shortest weaning period of any mammal, just 4 days, at which time they are on their own.



A female hooded seal, which stranded in Puerto Rico in July 2001.

Hooded seal juveniles in particular have been known to wander fairly large distances off the beaten track (*2*), and individuals have been found far south in previous years (*3–5*); however, never before to the extent witnessed during 2001. By the end of the year, more than 130 individuals, either dead or live stranded, were reported from as far south as the Caribbean island of Antigua in the west and the Canary Islands in the east. The stray records of 2001 constituted about 26% of all stray sightings/strandings