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This Week

Research Notes

Articles

Cover: A male piping plover guards a nest of speckled eggs during breeding season at a North American beach. New research suggests that people-jammed beaches may put these pocket-sized shorebirds at risk of extinction. (Photo courtesy of Lang Elliott for the Cornell Laboratory of Ornithology)

Departments

Letters

Getting together on lasers

It is a pity that Ivars Peterson did not get to mention that the university-based research cited in "Pushing lasers on a chip into the blue" (SN: 9/21/91, p.183) was actually part of a consortium effort supported by the Defense Advanced Research Projects Agency. This group of seven universities set their sights toward the realization of a number of semiconductor optoelectronic devices in the blue-green, of which the diode laser was a prime target. That this target has now been reached within our group as well (most immediately by the Brown-Purdue collaboration, with device performance exceeding that of the 3M accomplishment) is really a credit to these university groups working together. Such broadly based research efforts in academia that yield concrete results are quite rare.

A very good illustration of this coupling is indeed the collaboration between Notre Dame and Brown. By combining the materials science expertise at Notre Dame and the expertise in optical physics and laser devices at Brown, we were jointly able to identify the particular quantum well (from about half a dozen candidates) that has turned out to be the best choice so far for the diode laser. In addition, there is an aspect to the optical gain and laser action which we have been able to show is quite unique to these lasers, adding particular flavor to their future design.

Arto V. Nurmikko
Director
Center for Advanced Materials Research
Brown University
Providence, R.I.

Carbon carcinogens

Considering the fact that EPA views diesel particulates as "a probable human carcinogen" ("Busing away particulates," SN: 9/21/91, p.189), it seems logical to pose the question of whether buckyballs — which also come from soot — might also be carcinogenic. The reactivity of these new chemical toys might give pause to those who are planning to create large quantities for research labs. In uncontrolled circumstances, scientists might find themselves becoming subjects of their own experiments.

Vincent Egry
Ligonier, Pa.

IQ: What's average?

Aren't IQs normalized so that the average IQ is always 100? If so, why say that "average IQs rose dramatically from 1952 to 1982 in 14 industrial nations" ("The educated IQ," SN: 9/21/91, p.187)?

Allen Arata
Hawthorne, Calif.

Average relative *scores on IQ tests have risen sharply. These scores are then normalized.*
— B. Bower

Letters continued on p.378