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A New World of Materials: Renewable and Nonrenewable Resources

Edited by Philip H. Abelson and Allen L. Hammond

An important exploration of the new set of realities affecting the flow of raw materials—a probing of the increasing demand for them and the obstacles to their discovery and production.

A reliable flow of raw materials has been the fundamental factor in the health of the American economy and of the economies of all other industrial nations. While economic growth has begun once again in the United States and, more slowly, in Europe, it is predicated on a whole new reality of materials dramatically different from that of a decade ago. No longer can an abundance of basic commodities be taken for granted, and no longer can the supplying of any commodity be assumed continual. We have learned that the flow of existing materials is vulnerable to interruption by financial shifts, increased nationalization of foreign-owned properties, restriction of access to resources on public lands, and a host of other considerations born of the 1970’s. In the development of substitute materials we must hurdle these obstacles and also adhere to new regulations for environmental protection.

In February 1976 Science devoted an entire issue to a critical in-depth look at these and related problems. The special issue contained 24 papers written by some of the country’s foremost authorities. Thirteen more articles created by other, equally distinguished authors were added to the list, and the total is being published as a compendium to provide a meticulous look at Materials: Renewable and Nonrenewable Resources.

The compendium’s authors probe the implications of national policy, energy constraints, environmental considerations on materials production and use, the perspectives in needs and supplies of resources, high technology materials, and renewable and reusable resources. They examine those materials issues most vital to industrial economics, the future of materials research, and the effect of the new realities on the quality of life.

The result is rare and refreshing—a detailed study which yields an identification of critical problems as well as the authors’ consensus that, in principle, these problems are solvable. This overview must be studied by those involved in materials problems today, by those reaching for answers, and by all of us who will benefit from the solutions. Don’t miss this vital collection of papers. A brief sampling of the compendium’s contents reveals the importance of studying and dealing with these new realities.

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