Oddly, the critics themselves, preoccupied with such arcania as "narratology" and "redactional heuristics," tend to overlook whatever literary qualities are to be found in the Bible. Their work threatens to substitute one atomized view (the historical approach) for another "academic form of fragmentation." Eberstadt concedes that the history, law, poetry, moral philosophy, and religious symbolism in the Bible represent a "vast and demanding subject for literary inquiry." But so far, the Bible investigators have failed to explain how to read what "we somehow must understand if we are to understand ourselves."

SCIENCE & TECHNOLOGY

Mold for Success

"Plastics That Conduct Electricity" by Richard B. Kaner and Alan G. MacDiarmid, in *Scientific American* (Feb. 1988), 415 Madison Ave., New York, N.Y. 10017.

During the early 1970s, a student at the Tokyo Institute of Technology erred in an attempt to synthesize a polymer called polyacetylene. He used 1,000 times more catalyst than he was supposed to.

The result was a new kind of plastic, a silvery film that looked like aluminum foil, stretched like Saran Wrap, and overturned an idea that had persisted since such synthetics were introduced during the 1930s: Plastics do not conduct electricity.

Since then, report Kaner and MacDiarmid, chemists at the University of California, Los Angeles, and the University of Pennsylvania, respectively, "conducting polymers" have been developed that transmit electricity as efficiently as copper. They could be used to make cheap, powerful batteries, highly efficient circuit boards, and artificial nerves.

Conducting polymers are created by "doping" polyacetylene and other compounds with an iodine solution. "Doping" allows electrons to flow freely, increasing the polymer's ability to transmit electricity.

During the early 1980s, the authors created a prototype electric-car battery that was lighter than conventional nickel-cadmium or lead-acid batteries, and used no toxic materials. Last year, two Japanese firms, Bridgestone and Seiko Electronic Parts, began to market a rechargeable plastic-lithium battery that is more powerful than existing types and can store three times as much electricity.

A U.S. firm, Allied-Signal, is studying ways to use the new plastics in sensing devices—e.g., in a monitor that would tell consumers when the frozen food in supermarkets had been thawed during shipping. Medical applications might include replacements for damaged nerves, and in "internal drug-delivery systems" that doctors could implant in a patient and program to dispense a drug at regular intervals.

Additional uses for conducting polymers will appear, the authors believe, but only over time. As with conventional plastics after they were first developed a half-century ago, years of fine-tuning will be required to yield products that are "economically successful."