nior chemist and leader of the polymerphysics group. From 1963 onwards Graessley has been on the faculty at Northwestern.

A colleague describes Graessley's work as at "the interface between polymer physics and polymer processing." More specifically, he has studied the structural aspects of polymer rheology, polymerization reactor engineering, and statistical mechanics of cross-linked systems. In addition, he has made important theoretical and experimental contributions towards an understanding of how molecular structure and intermolecular interactions influence the properties of polymer liquids and networks.

### Japanese award prizes to Yoshidide Kozai

Yoshidide Kozai, a research associate at the Smithsonian Astrophysical Observatory, has received two of Japan's major scientific awards: the Japan Academy Prize and the Imperial Gift Prize.

The pair of prizes were given in recognition of Kozai's research in celestial mechanics. This included studies of minor planets, artificial satellites, the motion of Saturn's moons and zonal harmonics. Kozai did much of this work in collaboration with the staff of the Geoastronomy Division of the Harvard-Smithsonian Center for Astrophysics.

Kozai earned an MS (1951) and a DS (1958) at Tokyo University. In 1952 he began work at the Tokyo Astronomical Observatory. He joined the Smithsonian Astrophysical Observatory in 1958.

### **Royal Society honors** Frank and Cosslett

Two British physicists will receive Royal Medals from The Royal Society in November. Sir Charles Frank, emeritus professor of physics at the University of Bristol, will be recognized for "his outstanding contributions to the theory of crystal growth, dislocations, phase transformations and polymers." V. E. Cosslett, emeritus reader of electron physics at the University of Cambridge, will be honored for "his outstanding contributions to the design and development of the x-ray microscope and the scanning electron microprobe analyser (scanning electron microscope).'

Sir Charles's work in crystal theory has found wide application in solid-state physics, chemistry, metallurgy and geology. His first major contribution was to the theory of growth and dissolution of imperfect crystals. He went on to make many contributions to the theory of crystal growth and transformation. He has been associated with the University of Bristol since 1946 when he left the Air Ministry, with which he served during the

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