



**m a t e r i a**  
CATALYSTS FOR CHANGE

## **Grubbs, Schrock, and Chauvin Get Nobel in Chemistry**

Oct. 5, 2005 (Bloomberg) -- Robert H. Grubbs, Richard R. Schrock and Yves Chauvin won the Nobel Prize in chemistry for discovering a method used by the chemical industry to make drugs and plastics more efficiently and with less harmful waste.

Grubbs, 63, of the California Institute of Technology, Schrock, 60, of the Massachusetts Institute of Technology and Chauvin, 74, of the Institut Francais du Petrole received the prize "for the development of the metathesis method in organic synthesis," the Stockholm-based Nobel Foundation said today in a statement on its Web site. They will share this year's 10 million kronor (\$1.29 million) award.

"This represents a great step forward for "green chemistry," reducing potentially hazardous waste through smarter production," the Nobel committee said. "Metathesis is an example of how important basic science has been applied for the benefit of man, society and the environment."

The word metathesis means "change-places," the foundation said. In metathesis, a chemical bond is broken and made between carbon atoms in a way that causes the atom groups to change places.

In 1971, Chauvin explained in detail how metathesis reactions function, the foundation said. In 1990 and 1992, Schrock and Grubbs, made efficient catalysts for metathesis.

Because of these discoveries, companies in the chemical industry are able to develop products using fewer resources at normal temperatures, which in turn mean less hazardous waste products, the foundation said.

"Considering the short time during which Grubbs' and Schrock's catalysts have been available, the breadth of applications, is truly remarkable," the committee said.

### Nobel Awards

Annual awards for achievements in physics, chemistry, medicine, peace and literature were established in the will of Alfred Nobel, the Swedish inventor of dynamite, who died in 1896. The Nobel Foundation, whose investments were valued at 3 billion kronor on Dec. 31, was founded in 1900 and the prizes were first handed out the following year.

The economics prize was created in 1969 in memory of Nobel by the Swedish central bank. Only the peace prize is awarded outside Sweden, by the five-member Norwegian Nobel Committee in Oslo.

The first chemistry laureate was Jacobus Henricus van't Hoff in 1901 for his discovery of the laws of chemical dynamics. Other award winners include Marie Curie in 1911 for discovering radium and polonium and Willard Frank Libby in 1960 for developing the method of radiocarbon dating.

Yesterday, Roy J. Glauber, John L. Hall and Theodor W. Haensch won the Nobel Prize in physics for using optics to make devices and measurements more precise. On Monday, the Nobel Prize for medicine was awarded to Australian scientists Barry J. Marshall and J. Robin Warren for their discovery of the bacterium that causes more than 80 percent of stomach ulcers. The economy prize will be announced on Monday.

To contact the reporter on this story:

Heidi Christensen in Copenhagen at [hchristensen@bloomberg.net](mailto:hchristensen@bloomberg.net)