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Faculty Research: Vahe Marganian and Jadwiga Smith

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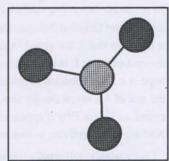
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Faculty Research

Reducing Waste Products in Electroplating



The surfaces of many common metals are often coated with a very thin layer of a "precious" metal, creating an attractive and rust-proof product. Examples of such products range from the proverbial "silver spoon" to sophisticated coatings on computer components. The process of electroplating involves the passage of controlled electricity through a solution of the metal (silver, gold, platinum, etc.) which forms a uniform coating on the object. Unfortunately, electroplating processes also generate chemical waste products which must be treated properly or disposed of legally in a landfill. Dr. Vahé Marganian and graduate student Russell Haschke of the Department of Chemistry are investigating the nature of such waste products. Plating baths tend to build up impurities in them as they are used. In time, the bath must be disposed since the level of impurities exceeds health and safety standards. Specifically, the Marganian-Haschke team are investigating such impurities in the electrodeposition of nickel from nickel sulfamate solutions. Low-level concentrations of impurities are being studied by such techniques as Ion Chromatography, Ultraviolet-Visible, Infrared, and Atomic Emission Spectroscopy. Such investigations lead to a more fundamental understanding of the formation of impurities, the extension of the lifetime of nickel-plating baths, and the reduction of hazardous waste products.

Toward a Theory of Drama



Contemporary literary theory is one of several interests of English Department Professor Jadwiga Smith. Smith's point of departure is the work of European philosopher and literary critic Roman Ingarden on the intersubjective structure of artistic objects. Ingarden argued that all literary works have a common structure or skeleton on the basis of which individual readers build their interpretations. He opposed such contemporary theories as deconstruction, which claims that there is no common ground in interpretation between author and reader and that consequently each reader has total freedom of literary interpretation. Prof. Smith's latest book, The Aesthetics of Roman Ingarden: Toward a Theory of Drama, is a theoretical inquiry into the essence of stage plays. How much of the common skeleton which Ingarden postulated is present for every reader or viewer? Smith argues that plays possess four levels or strata, each one essential and all four interdependent. The first element is sound, without which a play becomes pantomime. Second are the larger units, words and sentences, which begin to generate meaning. Smith's third element is "aspects," what the work gives the viewers as the basis for the concretization of the object, which occurs on the fourth and final stratum, "represented objects," the fullest version of the play.