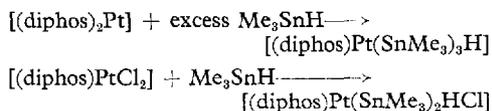
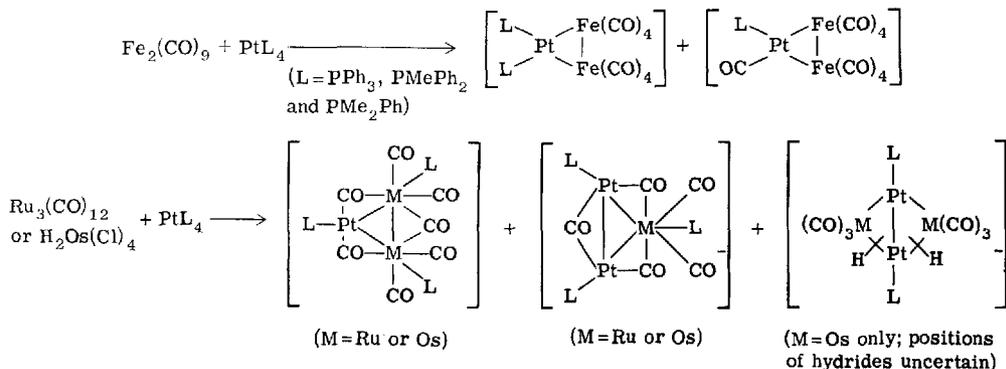


the halide is altered in the order chloride > bromide > iodide.

F. Glockling (Queen's University, Belfast) reported the preparation of platinum(IV) complexes of trimethylstannane which, although widely implicated as intermediates



M. I. Bruce (Bristol University), described a number of interesting complexes in which iron, ruthenium, or osmium were co-ordinated directly to platinum(II).



in the reactions of platinum(II) complexes of trimethylstannane, had not been isolated until recently. Two main routes both involving oxidative-addition reactions were reported for the preparation of these complexes:

J. Dehand (Institute of Chemistry, Strasbourg) discussed the vibrational spectra of the related compounds  $[(\text{pyr})_2\text{M}(\text{M}'(\text{CO})_n)_2]$ , where M = Pd or Pt,  $\text{M}'(\text{CO})_n = \text{Mn}(\text{CO})_5$ ,  $\text{Co}(\text{CO})_4$  or  $\text{Mo}(\text{CO})_3(\pi\text{-C}_5\text{H}_5)$  and pyr = pyridine, 3-methylpyridine or 4-methylpyridine.

## Rhodium Coating on Plastics

### RADIO FREQUENCY SPUTTERING TECHNIQUE

Techniques developed by Precision Instrument Company of Palo Alto, California, have made it possible to coat heat-sensitive substrates with a variety of metals by sputtering. This work grew out of the need to coat strips of polyester with thin films of rhodium. The rhodium-coated strips form part of a mass memory computer core but any distortion renders them useless for this purpose. The sputtering technique used by the company ensures that substrate temperatures do not exceed 50°C, thus avoiding thermal distortion. This enables pin hole-free metal coatings 200Å thick or less to be deposited uniformly over the whole surface of the substrate to ±10 per cent accuracy.

The apparatus was developed from work carried out at Argonne National Laboratory.

It consists of a supported glow discharge system. The rhodium or other metal to be coated is fixed to a cathode connected to a radio frequency or d.c. power supply and is enclosed in a vessel capable of withstanding a high vacuum. The substrate is supported some 10 cm below the cathode. Between the cathode and the substrate is a double coil of wire connected to a 1.2 kW, 13.5 MHz R.F. power source. After evacuation to 10<sup>-6</sup> torr and backfilling to 10<sup>-3</sup> torr with argon, power in the double coil stimulates a glow discharge in the argon, so that argon ions strike the cathode metal target and displace metal atoms, which are deposited on the substrate. The substrate temperature remains low because it is not connected to the electrical system.