E - 12 **EFFECT OF NITROBENZENE AND OTHER PHOTOACTIVATORS OF PHOTOCHEMICAL REACTIONS OF NATURAL RUBBER AND MODEL OLEFINS**

**H. D. W. M. Perara, A. Coomarasamy** *and* **L. M. K. Tillakaratne**
(*Rubber Research Institute, Telawala Road, Ratmalana*)

Natural rubber being an unsaturated polymer is very reactive towards a variety of reagents. It is susceptible to oxidation in the presence of heat, light, ozone, etc. In the present work the effects of nitrobenzene, substituted nitrobenzenes, benzophenone ferric acetyl acetonate, cobalt acetyl acetonate on the degradation of raw natural rubber are studied to find an effective reagent and conditions to produce liquid natural rubber.

Studies were also carried out with model olefins as methyl cyclo hexene and cyclo hexene with these activators in the presence of UV light. The (present) analysis carried out showed that several oxygenated products such as alcohols and ketones are produced during the exposure to UV light. Of those compounds used as activators nitrobenzene was found to be most effective in bringing about chain scission of natural rubber which leads to the formation of liquid natural rubber.

The results of these studies are given in detail in the paper and based on these results probable mechanism of degradation of natural rubber is suggested.