〔Chem. Lett., **1989**, 555〕

Nature of Free Radical Formation in Acrylic Resins by Plasma-Irradiation.

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The room temperature ESR spectra of the radicals in four kinds of plasma-irradiated acrylic resins, PMMA, PMAA, and their copolymers, were studied. The spectra of the copolymers have shown unique patterns and the spectral intensity was proportional to the relative amount of carboxylic acid group in acrylic resins.

〔Proc. Jpn. Symp. Plasma Chem., **2**, 209 (1989)〕

Wettability of Polymer Surface Introduced by Oxygen Plasma Treatment and its Decay with Time.

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In order to gain insight into the nature of plasma-treatments and find ont the way to minimize the decay of the wettability acquired by plasma treatment, we have carried ont oxygen plasma treatment on several conventional polymer surfaces under various experimental conditions. Novel experimental observations on surface wettability and its decay in the plasma-treated polymers have been obtained, and the mechanism for the decay of the wettability with time has been suggested.

〔Bunseki Kagaku, **38**, 218 (1989)〕

Simultaneous Determination Method for Organic Solvent Vapor Mixtures in the work Place Atmosphere by Capillary GC following On-Column Cold Trap Preconcentration.

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A system for simultaneous determination of 18 organic solvents in the work place atmosphere, which are required to be measured by the Japanese labor safety and hygiene law, has been developed. The system is based on on-column cold trap preconcentration with liquid nitrogen followed by capillary gas chromatographic separation. The above 18 organic solvents were almost completely separated. The system was successfully applied to simultaneous determination of organic solvents in environmental air from a room used for organic waste combustion in Nagoya University.