



1960's

Development of Negative Photoresist

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Eastman Kodak's negative photoresist KPR was used in the photolithography technology developed at Bell Laboratories in 1955, and in 1959, a planar type integrated circuit (IC) technology was invented by Fairchild Semiconductor by applying this photolithography technology. However, in the manufacture of integrated circuits that started in 1960, there was a low yield problem caused by pinhole defects in photoresist, resist peeling during development, scum residues and so on. Eastman Kodak introduced KTFR (Kodak Thin Film Resist) in 1961, reflecting and improving these problems experienced by Fairchild and other device makers. KTFR was widely used for subsequent IC manufacturing.

In the 1960s, semiconductor device manufacturers in Japan also imported KTFR for their transistors and IC manufacturing. However, since the photoresist was sensitive to changes in temperature and humidity and was unstable in Japanese environment, the demand for domestic production of photoresists increased, and Tokyo Ohka developed and domestically produced negative photoresist (OMR - 81) in 1968. OMR became widely used not only in Japan but also in the world.

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