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[\[PDF \(1025K\)\]](#) [\[References\]](#)**The Observation of Ink Vehicle by Osmium Labeling Technique**Yasushi OZAKI¹⁾1) Analytical Division, Research Institute National Printing Bureau Incorporated
Administrative Agency**Abstract**

It is important to observe the expanse and penetration of ink vehicle in paper for the printing property. However, it is difficult to directly visualize the distribution of the ink vehicle as is. We noted that osmium tetroxide (OsO_4) was selectively modified with ink vehicle in a gas phase. As a result, ink vehicle labeled with osmium could be observed by SEM (Scanning Electron Microscope), EPMA (Electron Probe Micro-Analyzer) and TEM (Transmission Electron Microscope). The distribution of ink vehicle on the surface of offset printed paper could be observed as backscatter electron images by SEM. The penetration of ink vehicle into paper could be observed from cross section side by an OsMa image of EPMA. The blend polymers in the ink vehicle could be observed as different contrasts by TEM.

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