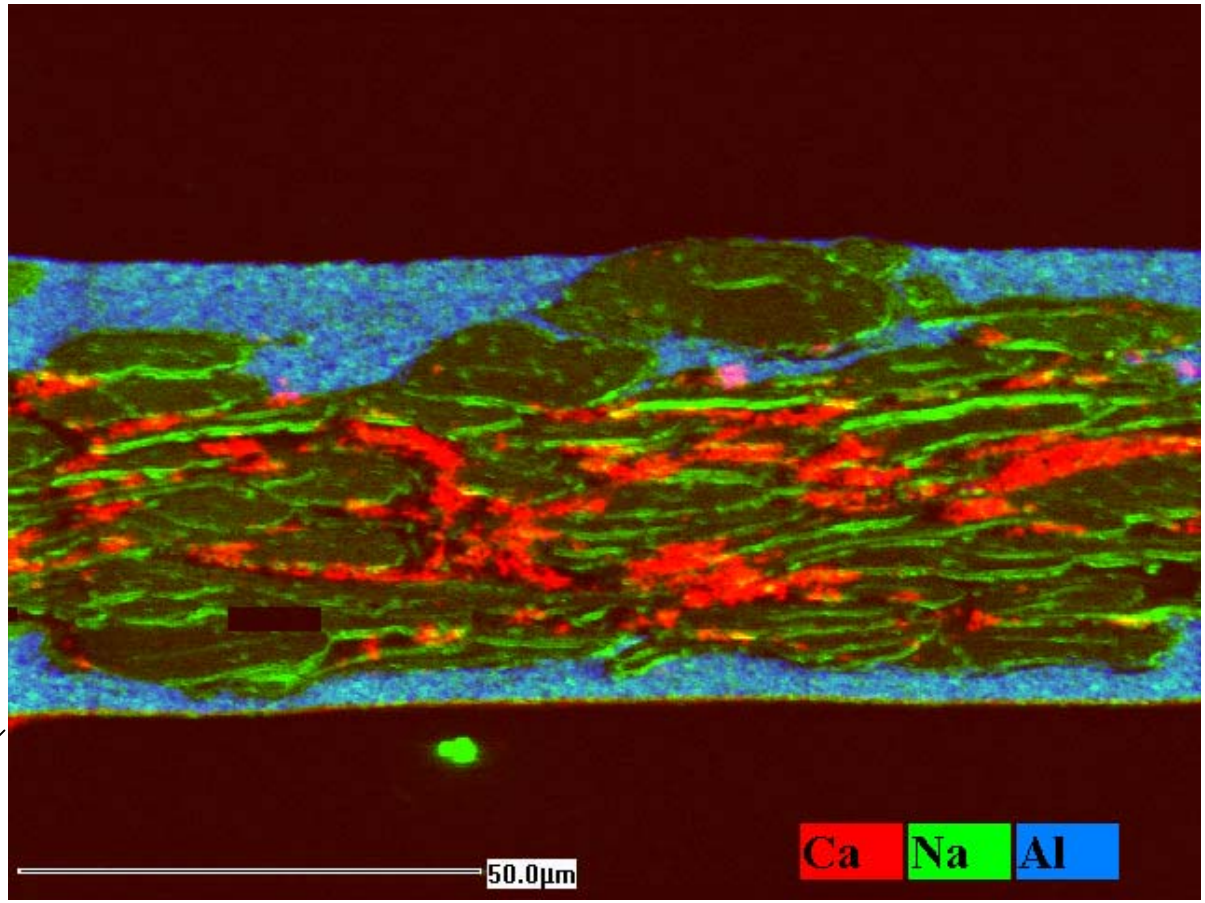
# SIMS Sections to see ink component distribution

## Imaging SIMS can give high resolution ion fragment maps

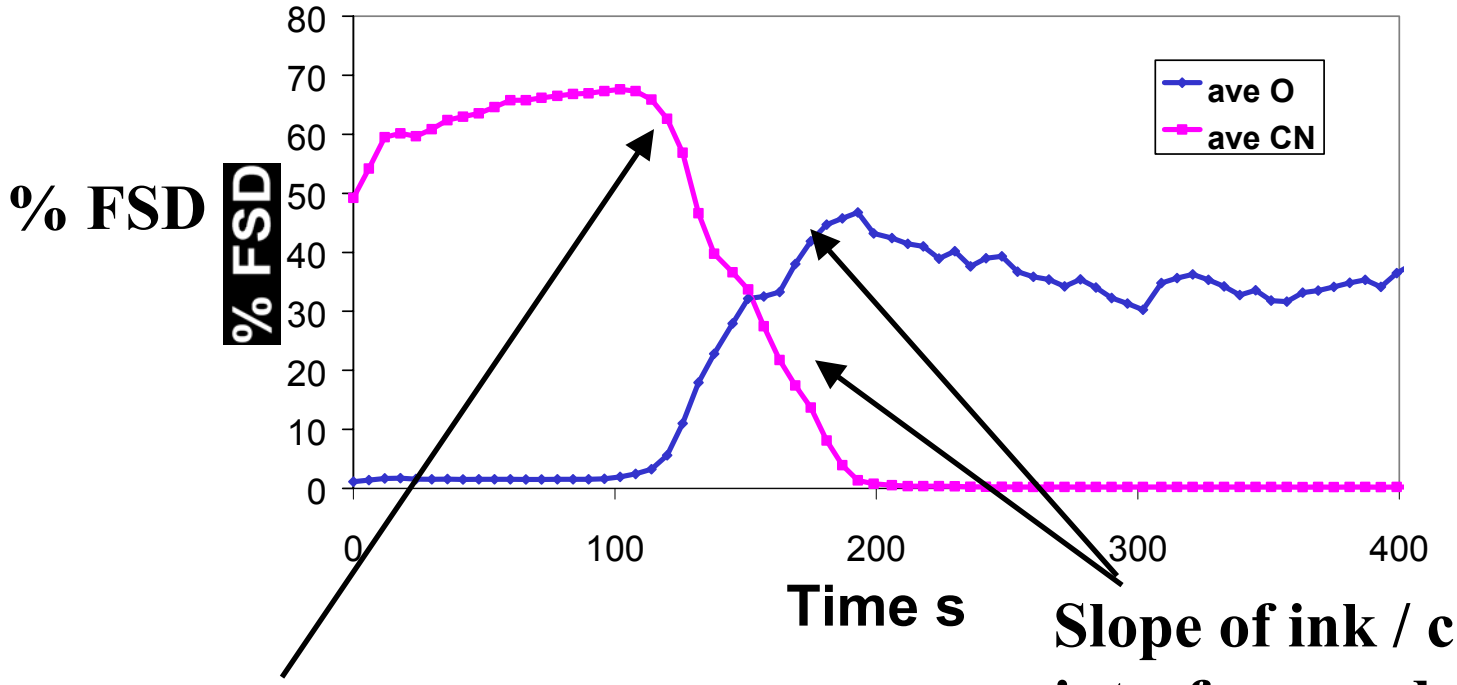



## Ink pigment on top of the coating layer - no penetration

Preston J.S., Elton N.J., Husband J.C., Legrix A., Heard P., Allen G. "SIMS Analysis of Printed and Coated Paper" Proc. 2000 TAPPI Int. Printing and Graphic Arts Conf., Savannah, Tappi Press, Atlanta GA, 101

# Depth Profiling - shows interface between ink and paper

**High resolution compositional data can be obtained by depth profiling in the Z direction.**

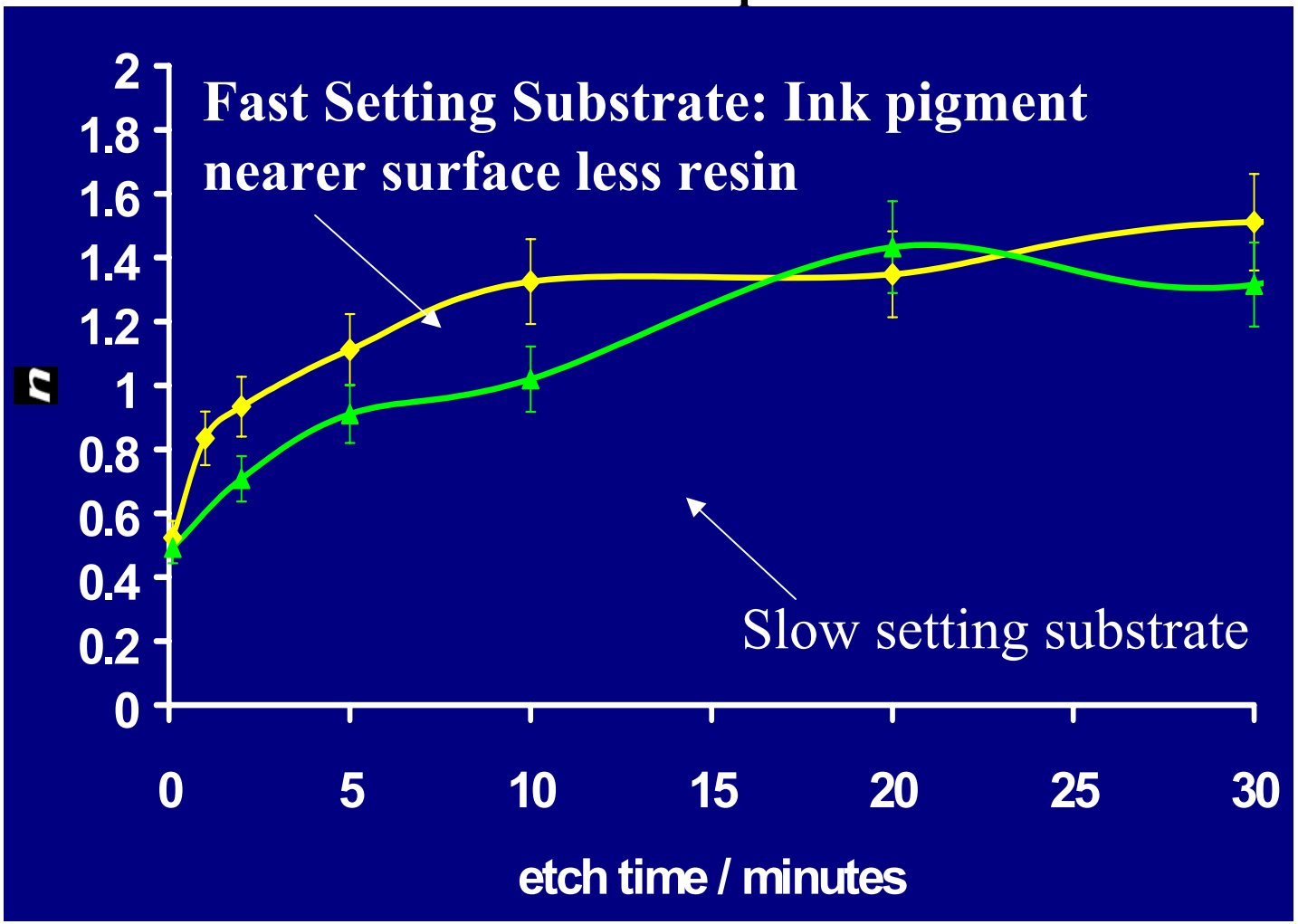



**CN - trace indicates ink film thickness**

**Slope of ink / coating interface modelled using microroughness - CN- does not penetrate coating**

# XPS Analysis shows evidence of resin depletion

**Etching XPS can differentiate small differences in resin / pigment distribution at print surface**




Dalton J.S., Preston J.S., Heard P.J., Allen G.C., Elton N.J., Husband J.C., "Investigation into the distribution of ink components throughout printed coated paper – Part 2: Utilising XPS and SIMS", "Colloids and Surfaces A: Physicochemical and Engineering Aspects" Elsevier Science., 205 (2002), 199 213