

Abstracts

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Dual Mode Polarizing Pellicle

James R. Daniels

This article describes techniques for using an angled glass pellicle to merge the path of light reflected from a sample with the line of view, permitting glare-angle lighting/observation view normal to the surface. Among other applications, reflective properties of ballpoint and some other writing inks, observed under such conditions, may permit determination of stroke sequence at intersections with other media.

Ranking Handwriting Attributes in the Signatures of One Person: A Survey of Forensic Document Examiners

Martha A. Blake

A survey was designed to capture how forensic document examiners evaluate a set of signatures by 1 person and rank the significance of various handwriting aspects in terms of individualizing quality. Examiners were asked to rank the individualizing quality of a total of 40 handwriting attributes chosen by the author. Sixteen examiners completed the survey. The rankings were compiled and showed moderate to excellent consensus in the ranking of 92% (37) of the attributes and a lack of consensus in the ranking of only 8% (3) of the attributes.

Awareness of the Potential of the EDD Serving as a Source for Transfer of DNA

Diane K. Tolliver and Carl A. Sobieralski

Electrostatic Detection Devices (EDD) have the potential to collect and transfer DNA¹ during processing. "Touch DNA" can now be detected and interpreted under current DNA processes at the Indiana State Police Laboratory. Analysis is by capillary electrophoresis with the PP16 kit² (Promega PowerPlex 16 kit). The EDD bed and humidification chamber were examined for the presence of DNA sources from shed cells. This research examined whether or not EDD processing of documents may be a source of cross-contamination. The 2008 American Society of Questioned Document Examiners (ASQDE) conference theme, "Reasoning with Technology: A Cognitive Approach to Casework," was applied in this research in examining whether or not the forensic document examiner needs to heighten his/her sense of awareness of possible DNA cross-contamination issues when examining documents using the EDD.

Is Atomic Force Microscope a Suitable Tool for Studying Crossing Lines?

Magdalena Ezcurra

This work is a preliminary inquiry into the usefulness of atomic force microscope (AFM) to determine the sequence of crossing lines. Intersecting lines were prepared using different types of pens and printers and studied with AFM to discover whether any diagnostic feature could be found that would reliably indicate which line lay on top. The effect of the age of the ink/printer lines was also studied. Specimens were created with elapsed times between the applications of the 1st line and the 2nd line in seconds, days, weeks, and months in order to study whether the period of time elapsed between the entries, with possible hardening of resin components of certain inks, affected observations.