

## **THE CHEMISTRY OF INKJET INKS FOR DIGITAL TEXTILE PRINTING - REVIEW**

**BENJAMIN TAWIAH<sup>1</sup>, EBENEZER K. HOWARD<sup>2</sup> & BENJAMIN K. ASINYO<sup>3</sup>**

<sup>1</sup> Key Laboratory of Eco-Textiles, Jiangnan University, Ministry of Education, Wuxi, Jiangsu, China

<sup>1, 2, 3</sup> Department of Industrial Art (Textiles), Kwame Nkrumah University of  
Science and Technology, PMB - Kumasi, Ghana

### **ABSTRACT**

Inkjet inks are the most important component in inkjet printing. The formulation and chemistry of inks determine the printing quality as well as jetting characteristics. Digital printing technology has transformed textiles printing with significant success in terms of print speed, print head technology and color gamut. Nonetheless, ink penetration and its related quality problems are still receiving a high level of attention by researchers around the globe to develop superior inks that can surpass the quality of prints obtained by the conventional methods of printing. This review seeks to take a perfunctory look at the various ink chemistries being developed to address the color related problems in digital textiles inkjet printing and the various pretreatment technologies available for ensuring excellent K/S and color fastness as well as jetting behavior of Newtonian inkjet inks in DOD drop formation. In addition, various issues relating to quality of digital inkjet printer fabrics and ink development have been highlighted. Significant strides have been made in the quest for environmentally friendly universal inks that can print all textiles substrate.

**KEYWORDS:** Inkjet Ink, Dye, Pigment, Digital Printing, Textile