



Fig. 14. Enzymatic indigo dyes for fabric dyeing. **A.** Proposed reaction mechanism for the UPO-catalyzed formation of different indigo dyes. (1) 1*H*-indoles; (2) 2,3-epoxy-1*H*-indoles; (3), 3,3-dihydro-1*H*-indol-2-ones; (4) 3-hydroxy-1*H*-indoles; (5) indigos: R= H (indigo), R=Br (6,6'-dibromoindigo) or R= Cl (6,6'-dichloroindigo). **B.** Oxidized and reduced (soluble) forms of Tyrian purple (6,6'-bromoindigo) during the dyeing process. **C.** Enzymatic *in situ* dyeing of cotton fabrics. **D.** Dyeing persistence after washing one of the above fabrics dyed with enzymatic Tyrian purple. In part (**A** and **B**) adapted from Kalum et al. (2014a) and Herold-Majumdar et al. (2016).