



Fig. 12. Stereoselective hydroxylation in a byproduct-free enzyme cascade. Ethylbenzene conversion into (*R*)-1-phenylethanol by UPO, at expenses of methanol oxidation to CO₂ and H₂O, was obtained by increasing the number of cascade steps (**A**) resulting in higher product yield (**B**) as shown by green vs blue and red lines and reactions. *AaeUPO*, *Agrocybe aegerita* UPO; *PpAOx*, *Pichia pastoris* MOX; *PpFDM*, formaldehyde dismutase from *Pseudomonas putida*; *CbFDH*, formate dehydrogenase from *Candida boidinii*; *Rj3HB6H*, 3-hydroxybenzoate-6-hydroxylase from *Rhodococcus jostii*. Adapted from Ni et al. (2016).