

## **Bio-waste corn–cob cellulose supported poly (amidoxime) palladium nanoparticles for Suzuki-Miyaura cross-coupling reactions**

### **ABSTRACT**

Waste corn-cob cellulose supported poly(amidoxime) palladium nanoparticles (PdNs@PA) were prepared by the surface modification of waste corn-cob cellulose through graft copolymerization and subsequent amidoximation. The supported nanoparticles showed high catalytic activity (45-400 mol ppm) towards Suzuki-Miyaura cross-coupling of aryl bromides/chlorides with organoboronic acids to give the corresponding biaryl products up to 99 % yield with high turnover number (TON) 19777 and turnover frequency (TOF) 4944 h<sup>-1</sup>. The PdNs@PA was easily recovered from the reaction mixture and reused several times without significant loss of its catalytic activity.