One-pot, electrochemical synthesis of palladium nanoparticles and their application in suzuki coupling reaction

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Supporting Information

Fig S-1:

Fig S-1: (A) SEM images of Pd electrodeposit and (B) XPS of Pd-electrodeposit at potential -0.8 V for 2500 S.
**Fig S-2**

![Fig S-2](image)

**Fig S-2**: (A) TEM images of PdNPs formed in Bulk electrolyte and (B) XRD pattern of the formed PdNPs in electrolyte at applied potential -2.4 V for 1000s.

**Fig S-3**

![Fig S-3](image)

**Fig S-3**: (A) TEM image of the PdNPs formed in bulk electrolyte (B) TEM images of PdNPs deposited on conducting surface.
**Fig. S-4**

![TEM image of 50 mM Pd(OAc)$_2$ in BmimOAc](image1)

**Fig S-4**: (A) TEM image of 50 mM Pd(OAc)$_2$ in BmimOAc  

![TEM image](image2)

(B) TEM image of 250 mM Pd(OAc)$_2$ in BmimOAc, electrolysis time 1000 s.

**Fig S-5**

![TEM image](image3)

**Fig S-5**: TEM images  

(A) Electrolysis time required 1000 s  

(B) Electrolysis time required 2000 s at applied potential -1.6 V.
Fig S-6: TEM images of IL-PDNP after five recycle.
a) Analytical data of ionic liquid
b) Analytical data of products