Electronic Supplementary Material (ESI) for New Journal of Chemistry.
This journal is © The Royal Society of Chemistry and the Centre National de la Recherche Scientifique 2017

Supporting Information

Facile synthesis of Pd-decorated Pt/Ru networks with highly improved activity for methanol electrooxidation in alkaline media

Hui Xu, Ke Zhang, Bo Yan, Jiatai Zhong, Shumin Li and Yukou Du*

College of Chemistry, Chemical Engineering and Materials Science, Soochow University, Suzhou 215123, PR China

** Corresponding author: Tel: 86-512-65880089, Fax: 86-512-65880089;*

E-mail: duyk@suda.edu.cn (Y. Du).

This PDF file includes:

Fig. S1

Methods for calculating ECSA by CO stripping measurements

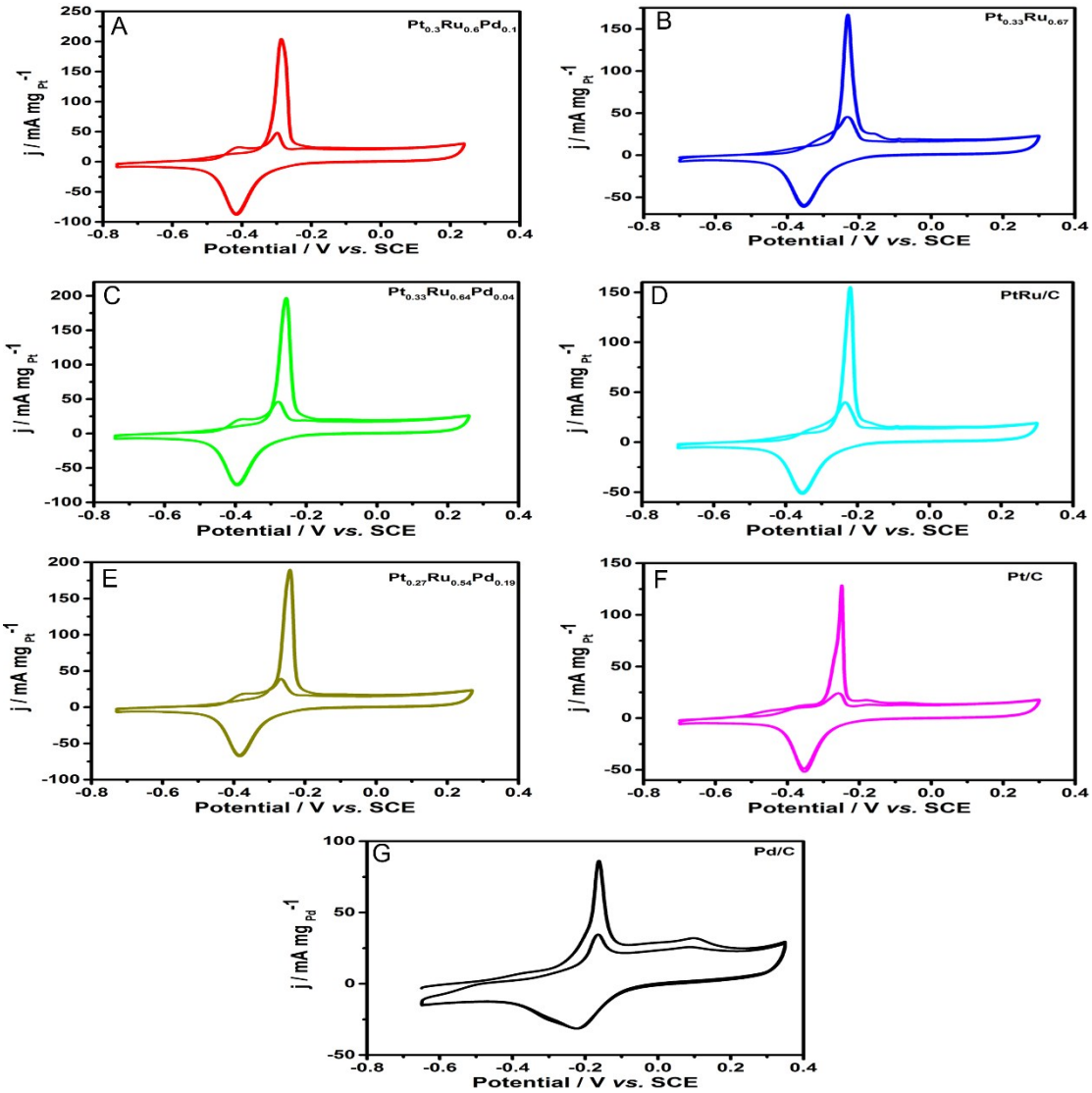

Fig. 3 CVs of CO stripping on the catalysts in 1.0 M KOH solution, scan rate: 50 mV s^{-1}.

the specific activity of catalysts was calculated according to the following equation:

$$ECSA = Q_{(CO)} / 0.484 \times m$$

where *m* represents the mass loading of noble metal (Pt or Pd) on the electrode and 0.484 (mC cm^{-2}) is the charge density required to oxidize a monolayer of CO on bright Pt and $Q_{(CO)}$ is the charge for the oxidation of CO, which is associated with the reaction:

$$Pt\text{-}CO + H_2O \rightarrow Pt + CO_2 + 2e^- + 2H^+$$

the charge $Q_{(CO)}$ was thus used to compare the active surface of the catalyst.