

ORAL DEFENCE ANNOUNCEMENT



SU DONGMENG

Noble Metal Nanowires: Synthetic Control, Morphology Induced Properties and Application In Electrochemical Catalysis

One dimensional nanomaterial has attracted increasingly copious focus and attention due to their peculiar properties and wide variety of applications not only in microscopic physics and fabrication of nanoscale electronic devices but also in electro catalytic devices and fuel cells. Enormous amount of works has been done to expand the application boundary. Yet among them, works exploring structure-property correlation and achieving rational design were rare. In this thesis, synthetic control, morphology induced catalytic property and application in electrochemical catalytic reaction of inorganic one dimensional nanomaterial has been explored, discussed and summarized. Finally a greatly enhanced operation durability of Au@Pd NW for ethanol oxidation reaction was accomplished and the mechanistic reason behind it was discussed.

Date: 14 Feb 2020
Time: 3.00 PM
Venue: Meeting Room, Research & Graduate
Studies Office, Level 2, SPMS
Supervisor: Prof Zhao Yanli
Co-Supervisor: Assoc Prof Liu Bin