

Supplementary Materials

Waste biomass-mediated synthesis of TiO₂/P, K-containing grapefruit peel biochar Composites with enhanced photocatalytic activity

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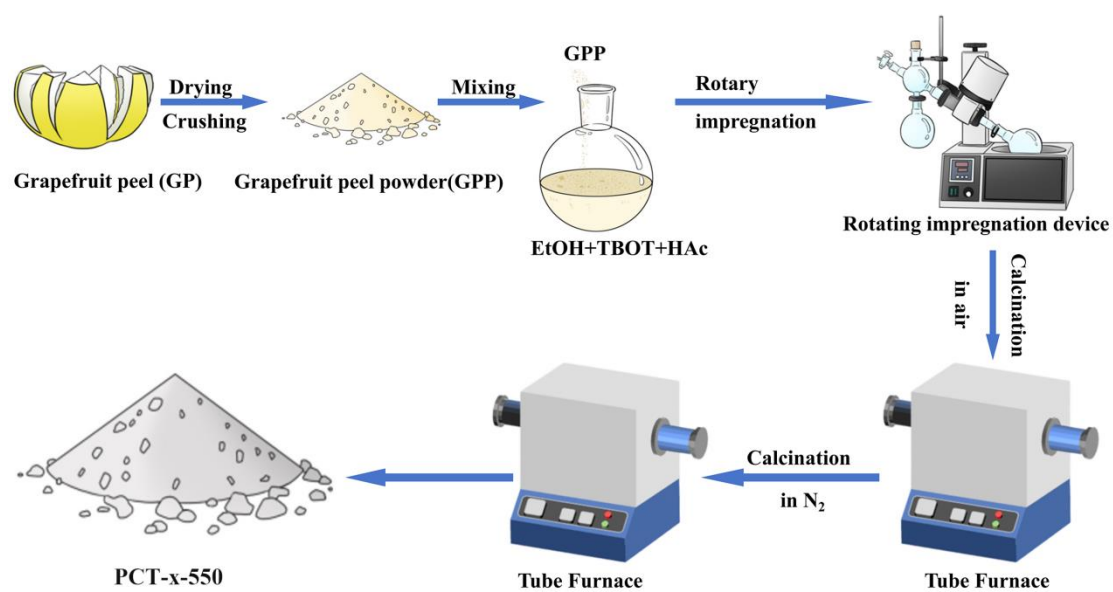
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Section S1. Instrument and equipment

Thermal gravimetric analyzer(TG209F3,NETZSCH Scientific Instruments Trading Ltd); The waring blender (JJ-2; Changzhou Jintan Jingda Instrument Manufacturing Co., Ltd) was utilized in this research. Electronic balance (LC-JA11003), freeze drier (LC-10N), magnetic stirrer hotplate (LC-MSA-H), desk centrifuge (TGL-LX185C) were acquired from Shanghai LiChen Instrument Technology Co., Vacuum tube furnace(GSL-1700X), provided by Hefei Kejing Materials Technology Co., Ltd, Ltd. Rotary evaporator (RE-52; Yarong Biochemical Instrument Co., Ltd); UV-Vis spectrophotometer (UV-2500 model; Shimadzu, Japan); UV diffuse reflectance spectrophotometer (UV-3600i Plus; Shimadzu, Japan); X-ray diffractometer (Ultima VI model; Rigaku Corporation, Japan); Field emission scanning electron microscope (SEM; Gemini SEM450; Carl Zeiss AG, Germany); Field emission transmission electron microscope (TEM; JEM-F200; JEOL, Japan); X-ray photoelectron spectrometer (Thermo Scientific K-Alpha; Thermo Fisher Scientific); Brunauer-Emmett-Teller (BET) surface area analyzer (ASAP 2460; Micromeritics, USA); and mercury lamp (CME-M300, China Microenergy (Beijing) Technology Co., Ltd); Fourier-transform infrared spectroscopy (FTIR, Nicolet iS50, USA); TOC analysis instrument(TOC-L, Shimadzu, Japan); Electron paramagnetic resonance(Bruker EMXnano, Bruker Corporation), Electrochemical workstation (CH1604E) provided by Shanghai Chenhua Instrument Co., Ltd., Raman spectrometer (renishaw inVa) by Renishaw plc, United Kingdom.



Scheme S1. Diagram of the preparation procedure of the TiO_2/PC composites