

# Aqueous cationic fluorinated polyurethane for application in novel UV-curable cathodic electrodeposition coatings

Junhua Chen<sup>1,2,3</sup>, Zhihao Zeng<sup>1</sup>, Can Liu<sup>1</sup>, Xuan Wang<sup>1</sup>, Shiting Li<sup>1</sup>, Feihua Ye<sup>1,2,3</sup>, Chunsheng Li<sup>1,2,3</sup> and Xiaoxiao Guan<sup>4,\*</sup>

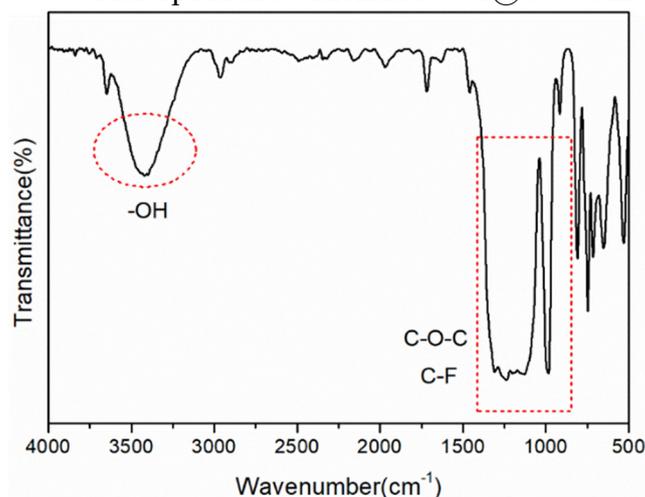
<sup>1</sup> School of Environmental and Chemical Engineering, Zhaoqing University, Zhaoqing 526061, China; cejhchen@yeah.net (J.C.); zhihaozeng0203@163.com (Z.Z.); gmczunper@163.com (C.L.); pearships@163.com (X.W.); lishitingqc@163.com (S.L.); yefeihua@zqu.edu.cn (F.Y.); lichunsheng@zqu.edu.cn (C.L.)

<sup>2</sup> Guangdong Provincial Key Laboratory of Environmental Health and Land Resource, College of Environmental and Chemical Engineering, Zhaoqing University, Zhaoqing 526061, China

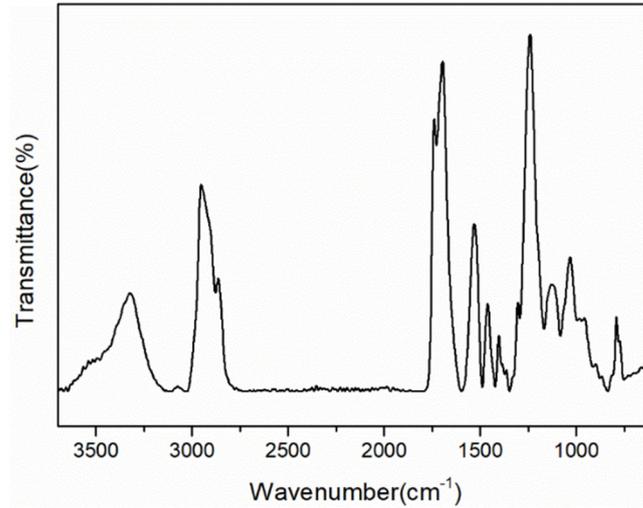
<sup>3</sup> Green Fine Chemical Joint Laboratory, Qingyuan 511542, China

<sup>4</sup> Zhaoqing Institute of Economic, Social and Historical Culture, Zhaoqing University, Zhaoqing 526061, China

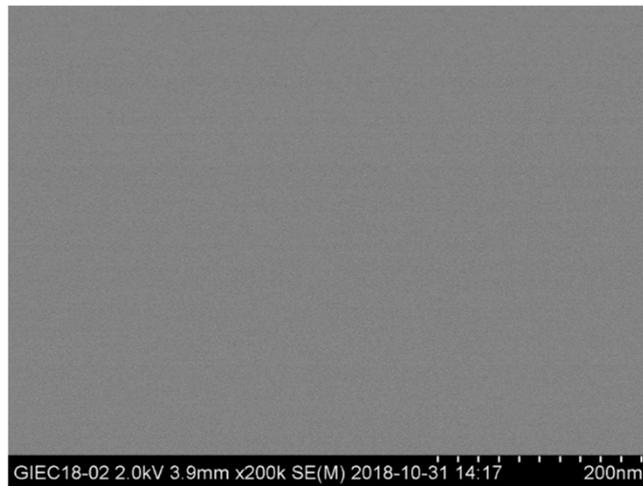
\* Correspondence: shenxiao0601@163.com



**Figure S1** FT-IR spectrum of pure PFPE-OH



**Figure S2** FT-IR spectrum of UV-cured film



**Figure S3** SEM photos of UV-curable EPD films

**Table S1** Atomic compositions of UV-curable EPD films before and after the abrasion

Atom	test		
	Atom % Before Wear	Atom % After Wear	Atom %* Ave. in Coating
F	9.89	27.34	4.82
C	70.16	51.38	71.34
O	17.15	16.85	19.26
N	2.8	4.43	3.58