Electronic Supplementary Information (ESI)

Porous Organic Polymers as a Platform for Sensing Applications

Shitao Wang,[1]* Hongtao Li,[1] Huanan Huang,[2] Xiaohua Cao,[2] Xiudong Chen,[2] Dapeng Cao[1]*

[1]*State Key Laboratory of Organic-Inorganic Composites, Beijing University of Chemical Technology, Beijing 100029, China*

[2] *School of Chemistry and Environmental Engineering, Jiujiang University, Jiujiang 222005, China*

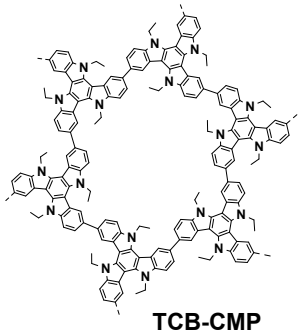
*Corresponding Authors. Email: stwang@buct.edu.cn; caodp@mail.buct.edu.cn

Table S1. References for the timeline (Fig.1 in the main text) of representative development of POPs for sensing applications in the last decade since 2012.

Year	Events	Groups	Ref.
2012	The first CMP sensor device (TCB-CMP) was reported for sensing arene vapors.	Donglin Jiang	**1**
	The first COP sensor (COP-2-4) were reported for sensing TNT and PA.	Dapeng Cao	**2**
2013	The first COF sensor (Py-Azine COF) was reported for sensing TNP.	Donglin Jiang	**3**
	The chiral CMP sensors were reported for sensing chiral amino alcohols.	Yaopeng Zhao & Ruixiang Li	**4**
2014	The first cyanide sensor was reported.	Hui Tong & Lixiang Wang	**5**
	The CMP film through electrochemical polymerization approach was fabricated.	Donglin Jiang	**6**
2015	The fluorescent pH sensor (HPP) was reported.	Xuesong Jiang & Hongzhi Liu	**7**
2016	The fluorescent 3D COF sensor (3D-Py COF) was reported for sensing PA.	Baoshan Wang & Cheng Wang	**8**
2017	The fluorescent COF sensors for triacetone triperoxide (TATP) were reported.	Dmitrii F. Perepichka	**9**
	The absorption competition quenching mechanism for POPs was proposed.	Xiaofei Zeng & Dapeng Cao	**10**
2018	The fluorescent POP sensor (PAN-L-Br) for sensing toxic pesticides was reported.	Zhonggang Wang	**11**
	The COF based solvatochromic sensor (Py-TT COF) was reported.	Thomas Bein & Florian Auras	**12**

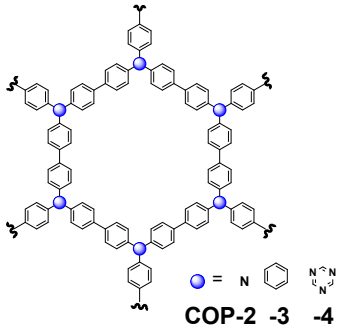
2019	The COF based chemiresistive sensors (COF-DC-8 and PBHP-TAPT-COF) for sensing gases were reported	Katherine A. Mirica; Michael J. Bojdys	**13, 14**
	The fluorescent COF-based sensor for Al^{3+} was reported	Jian-Ding Qiu	**15**
2020	The fluorescent POP sensors for latent fingerprints were reported.	Dengxu Wang	**16**
2021	An electrochemiluminescence biosensor based on COF nanosheets (Py-sp^2c-CON) was prepared for sensing microRNA-21.	Ruo Yuan & Dong-Rong Xiao	**17**
	A temperature gradient sensor based on ionic COF (COF-COOH/PAN) was reported for bionic thermosensation.	Shengqian Ma & Qi Sun	**18**

Figure S1. The chemical structures of POPs for the timeline (Fig.1 in the main text and Table S1) of representative development of POPs for sensing applications in the last decade since 2012.



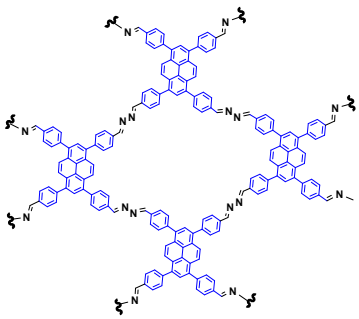
TCB-CMP

Jiang, et al. 2012



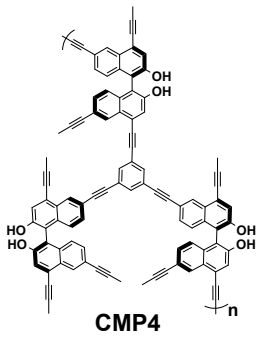
COP-2 -3 -4

Cao, et al. 2012



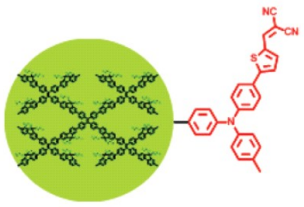
Py-Azine COF

Jiang, et al. 2013



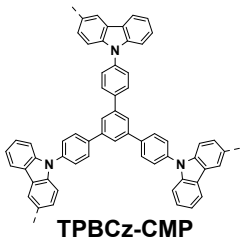
CMP4

Zhao, & Li, et al. 2013



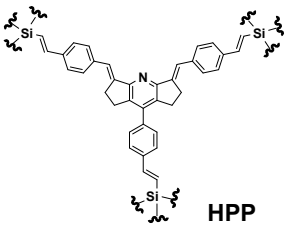
HBCPN-DCV

Tong, & Wang, et al. 2014



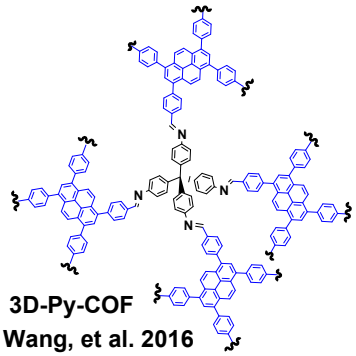
TPBCz-CMP

Jiang, et al. 2014



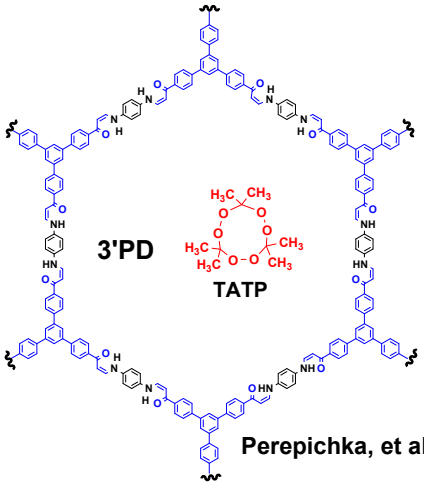
HPP

Jiang & Liu, et al. 2015



3D-Py-COF

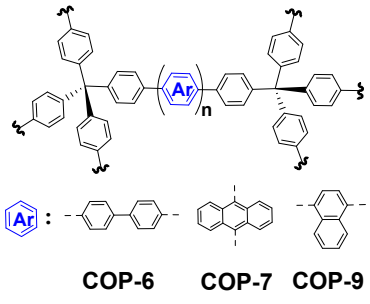
Wang, et al. 2016



3'PD

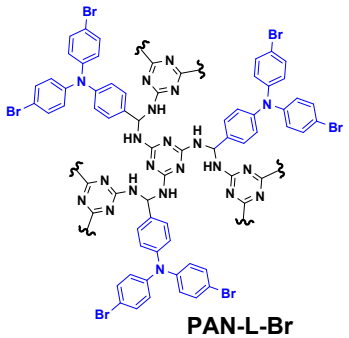
TATP

Perepichka, et al. 2017



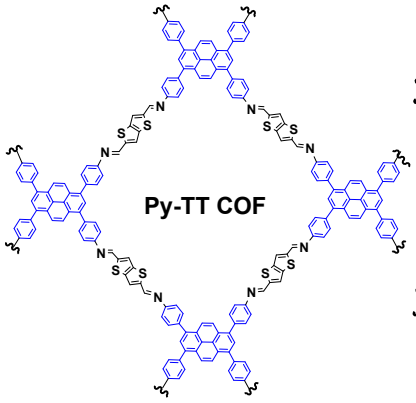
COP-6 COP-7 COP-9

Zeng, & Cao, et al. 2017



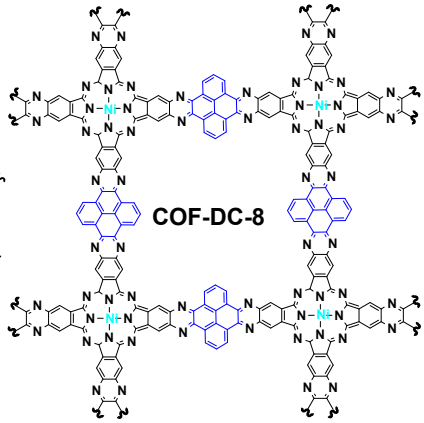
PAN-L-Br

Wang, et al. 2018



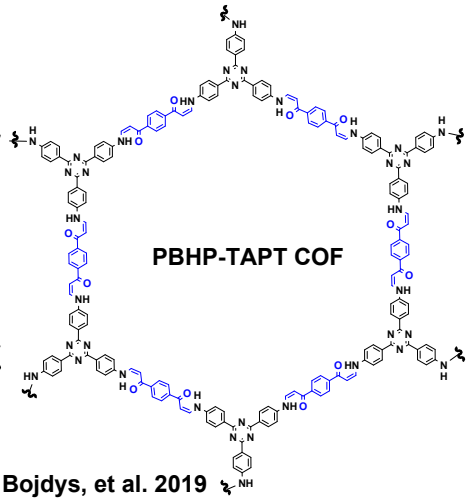
Py-TT COF

Bein, & Auras, et al. 2018



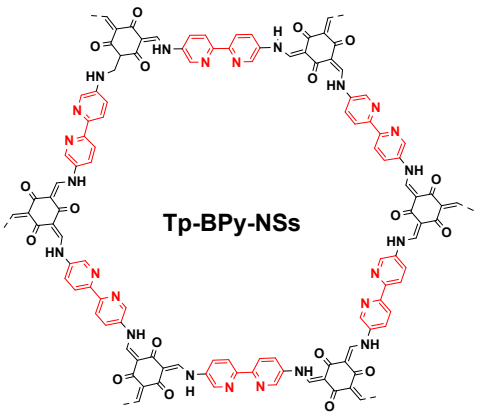
COF-DC-8

Mirica, et al. 2019

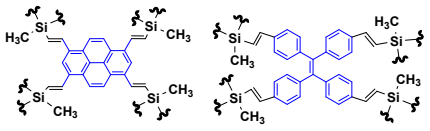


PBHP-TAPT COF

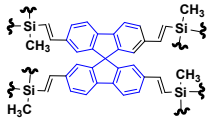
Bojdys, et al. 2019



Qiu, et al. 2020

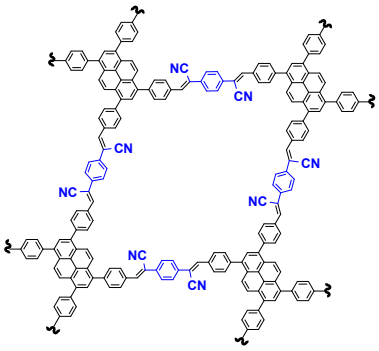


FPP-1 FPP-2



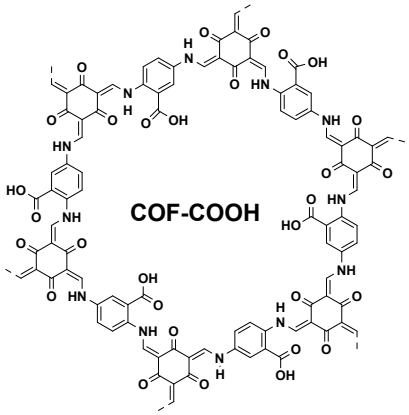
FPP-3

Wang, et al. 2020



Py-sp^{2}c-CON

Yuan & Xiao, et al. 2021



Ma & Sun, et al. 2021

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