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

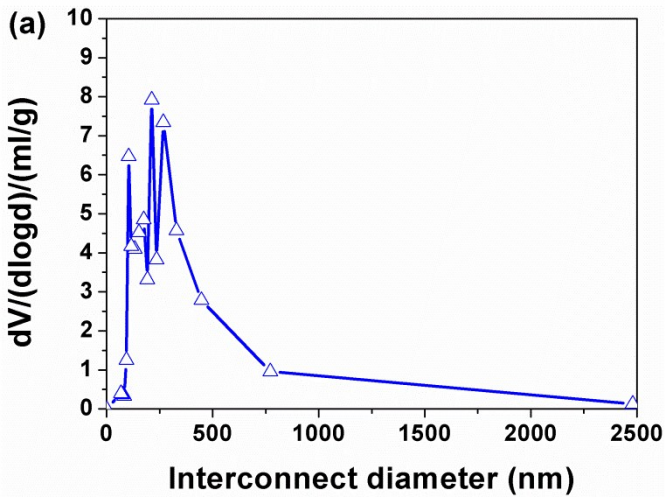
Electronic Supplementary Information for:

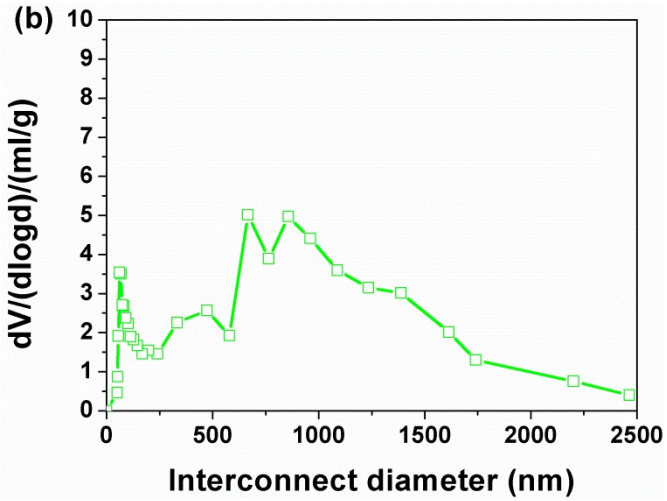
Surface glycopolymers-modified functional macroporous polyHIPE obtained by ATRP for removal of boron in water

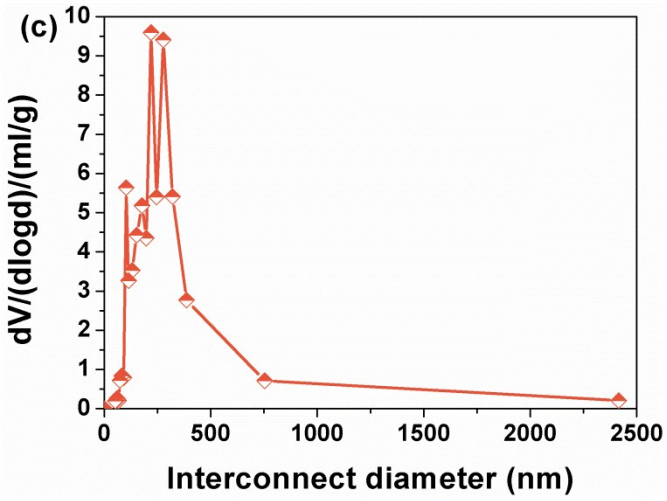
Xiangnan Chen[a], Weizhong Yuan[a,b,*], Miao Jiang[a,*] and Xiaoyun Xie[a,*]

[a] *Department of Dermatology, Tongji Hospital, Shanghai 10th People's Hospital, School of Medicine, School of Materials Science and Engineering, Tongji University, Shanghai 201804, P. R. China. E-mail: yuanwz@tongji.edu.cn (W. Yuan), jiang-miao@126.com (M. Jiang), xiaoyunxietj@126.com (X. Xie)*

[b] *State Key Laboratory for Modification of Chemical Fibers and Polymer Materials, Donghua University, Shanghai 201620, P. R. China*


(a)
dV/(dlogd)/(ml/g)
Interconnect diameter (nm)
0
1
2
3
4
5
6
7
8
9
10
0
500
1000
1500
2000
2500


(b)
dV/(dlogd)/(ml/g)
Interconnect diameter (nm)
0
1
2
3
4
5
6
7
8
9
10
0
500
1000
1500
2000
2500


(c)
dV/(dlogd)/(ml/g)
Interconnect diameter (nm)
0
1
2
3
4
5
6
7
8
9
10
0
500
1000
1500
2000
2500

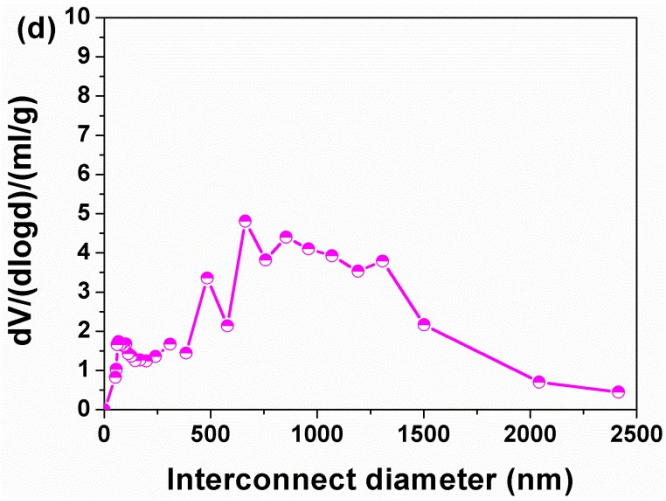


Fig.S1 Interconnection size distribution of (a) Sample A, (b) Sample B, (c) Sample C and (d) Sample D.

Table S1. Comparison of the boron uptake (q) and the adsorption equilibrium time (te) of various adsorbents

Support	Absorbent	q (mmol/g)	t (min)	Reference
MCM-41 particle	Glucamine	0.250	30	Anal. Chim. Acta, 2005, 547, 31–41.
CCTS beads	N-methyl-d-glucamine	3.250	720	Water Res., 2011, 45, 2297–2305.
GPTMS gel	N-methyl-d-glucamine	1.150	300	Colloids Surf., A, 2009, 341, 118–126.
PSF membrane	N-methyl-d-glucamine	0.193	90	J. Membr. Sci., 2013, 444, 50–59.
PSF membrane	2-Gluconamidoethyl methacrylate	1.770	120	J. Coll. Interface Sci., 2012, 368, 197-207
PS/DVB PolyHIPE	2-Gluconamidoethyl methacrylate	0.600	90	This work
PAN membrane	Glycidol	3.200	4	J. Mater. Chem. A, 2016, 4, 11656–11665.

Table S2. Comparison of the boron uptake and the adsorption equilibrium time of various adsorbents at 1 mg/L boric acid solution

Support	Absorbent	q (mmol/g)	t (min)	Reference
Composite microspheres	$Ni(OH)_2$	<0.01	2880	Chem. Eng. J. 2014, 244, 576–586.
IRA743 resin	N-methyl-d-glucamine	<0.01	30	Desalination, 2015, 370, 1–6.
PSF membrane	N-methyl-d-glucamine	<0.01	120	J. Membr. Sci., 2013, 444, 50–59.
PSF membrane	2-Gluconamidoethyl methacrylate	<0.01	60	J. Coll. Interface Sci., 2012, 368, 197-207
PS/DVB PolyHIPE	2-Gluconamidoethyl methacrylate	0.04	80	This work
PAN membrane	Glycidol	0.07	4	J. Mater. Chem. A, 2016, 4, 11656–11665.
PAA nanofiber membrane	Glycidol	0.18	15	Applied Surface Science, 2017, 402, 21–30 .