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Supplementary information

Xerogel modified diatomaceous earth microparticles for controlled drug release studies

U. T. Uthappa[a], G. Sriram[a], Varsha Brahmkhatri[a*], Madhuprasad Kigga[a], Ho-Young Jung[b], Tariq Altalhi[c], Gururaj M. Neelgund[d] and Mahaveer D. Kurkuri[a*]

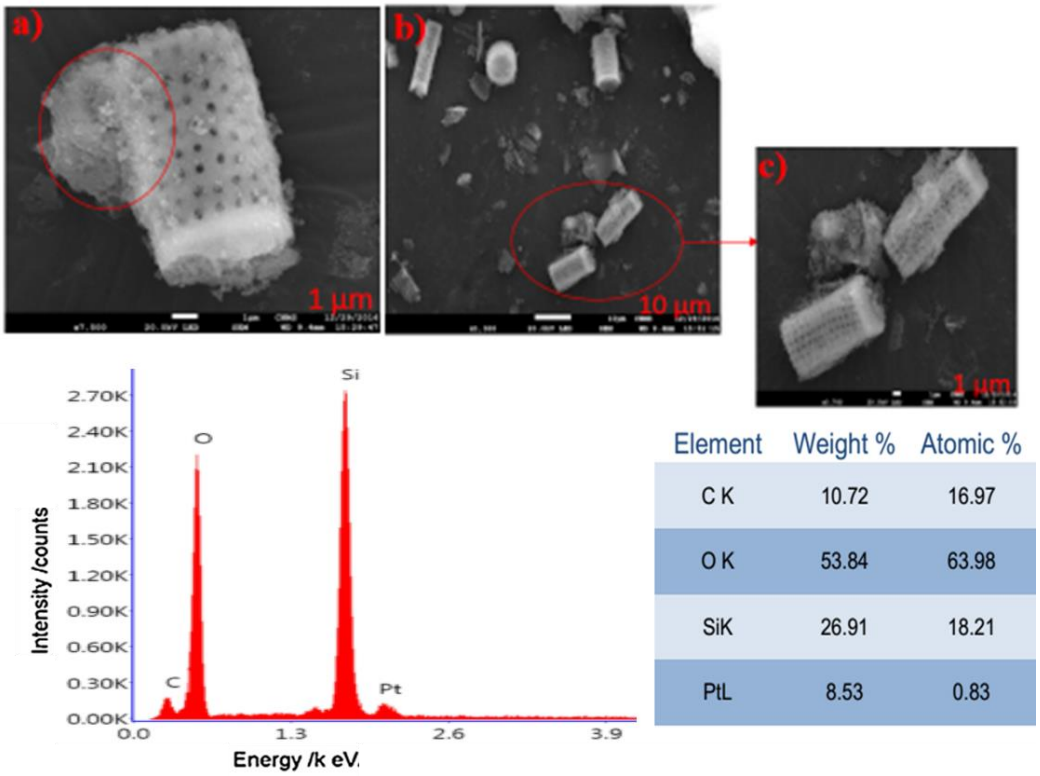
[a] *Centre for Nano and Material Sciences, Jain University, Jain Global Campus, Bengaluru-562112, Karnataka, India*

[b]*Department of Environment and Energy Engineering, Chonnam National University, 77 Yongbong-ro, Buk-gu, Gwangju 61186, Republic of Korea*

[c] *Department of Chemistry, Faculty of Science, Taif University, Taif, Saudi Arabia*

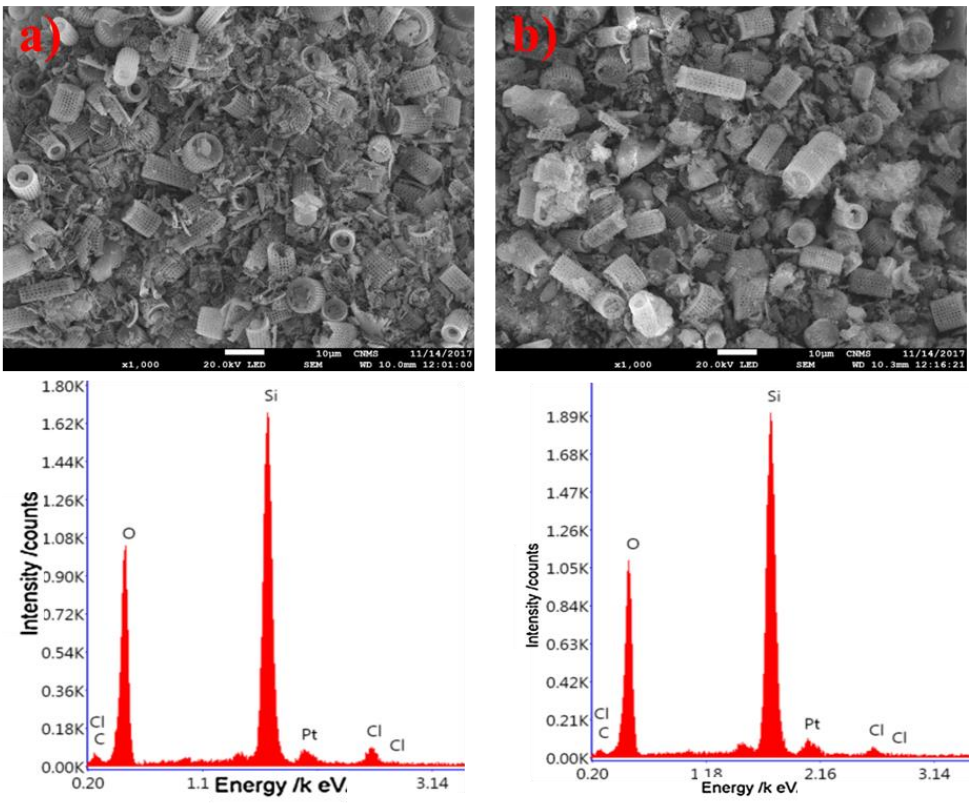
[d] *Department of Chemistry, Prairie View A & M University, Prairie View, TX 77446, USA*

[*] Corresponding authors.
E-mail addresses: mahaveer.kurkuri@jainuniversity.ac.in (Mahaveer Kurkuri);
b.varsha@jainuniversity.ac.in (Varsha Brahmkhatri).



Element	Weight %	Atomic %
C K	10.72	16.97
O K	53.84	63.98
SiK	26.91	18.21
PtL	8.53	0.83

Fig. S1. FESEM images of a) DE covered by big bundle of Xerogel b) Xerogel partially coated on DE showing the whole surface morphology c) High magnification of Xerogel partially coated on DE and corresponding EDAX.



Element	Weight %	Atomic %
C K	0.87	1.61
O K	48.43	67.61
SiK	35.91	28.55
ClK	1.04	0.65
PtL	13.76	1.58

Element	Weight %	Atomic %
C K	3.08	5.43
O K	50.63	66.98
SiK	33.27	25.07
ClK	2.26	1.35
PtL	10.76	1.17

Fig. S2. FESEM images after drug loading a) DE-DS (diclofenac sodium) b) DE-XER-DS and corresponding EDAX result.

Table S1 Summary of drug release with respect to time for all the samples carried out in the study.

Sample	Cumulative release (%)							
	2 h	**6 h**	**24 h**	**4 days**	**7 days**	**16 days**	**30 days**	**36 days**
DE pH 1.2	50.15	79.63	81.1	86.13	89.53	100		
DE XER pH 1.2	32.45	48.48	49.15	51.85	55.63	66.36	87.21	100
DE pH 7.4	71.32	96.19	98.15	100	100			
DE XER pH 7.4	49.89	90.74	92.2	96.2	100			

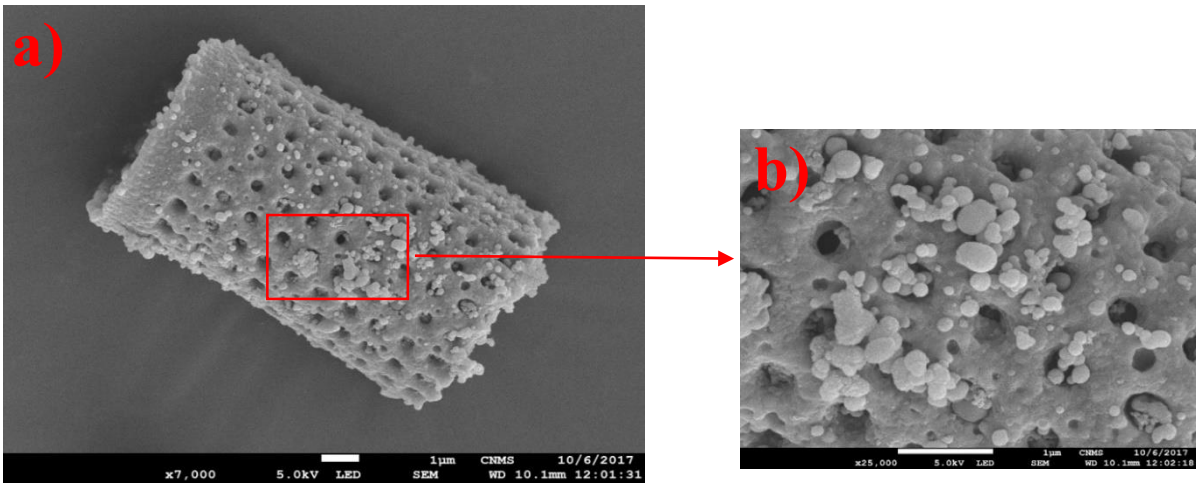


Fig. S3. FESEM images of a) DE-XER after 36 days of drug release it was stable b) High resolution of DE-XER.