

## Supporting Information

### Porous calcium silicate bioactive material-alginate composite for bone regeneration application

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**Supporting Information.** (3 pages) is available from the RSC Online Library or the author.

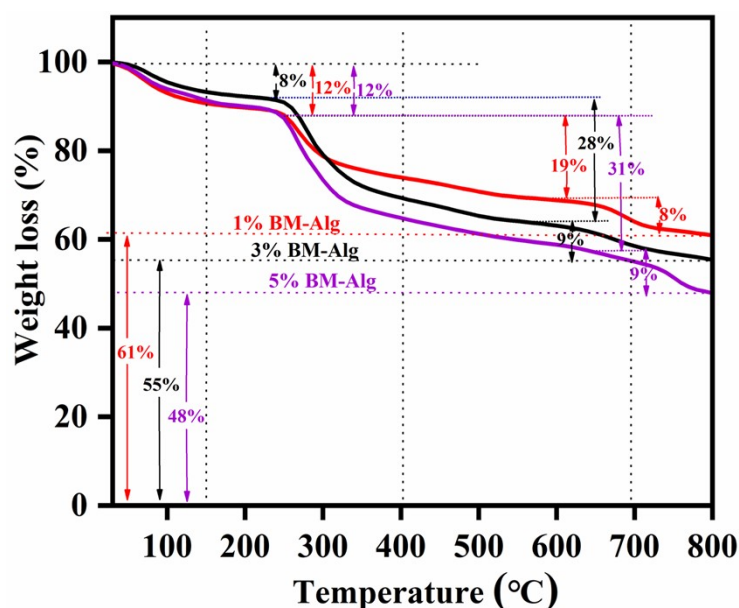
**Fig. S1** TGA thermogram of 1% BM-Alg (red curve), 3% BM-Alg (black curve), and 5% BM-Alg (purple curve) composite.

**Fig. S2** BET (surface area analysis) and BJH (pore size distribution) of a) 1% (red curve), b) 3% (black curve), c) 5% (purple curve) BM-Alg, and d) 1% BM-Alg 700 °C (blue curve).

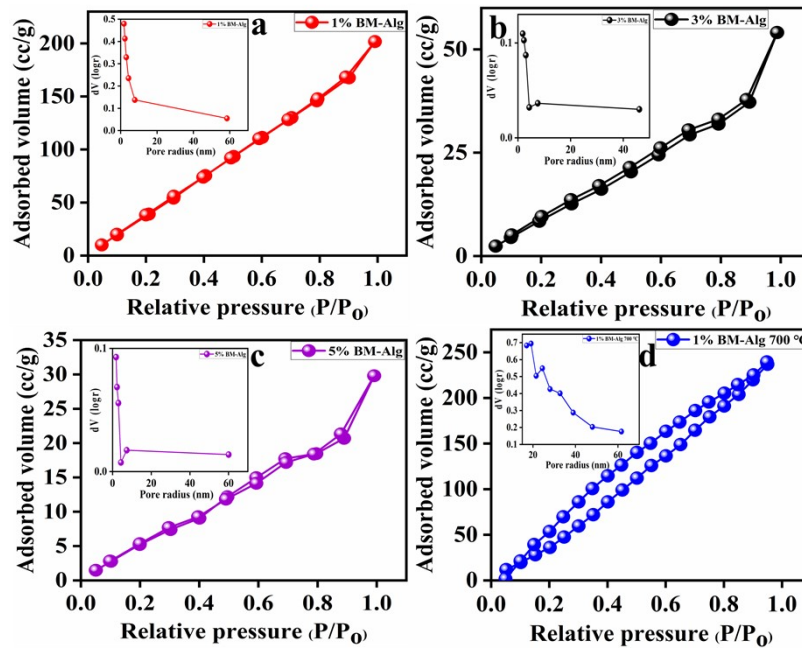
**Fig. S3** a) XPS survey spectrum and b) TEM images of 1% BM-Alg 700 °C.

**Fig. S4** Plausible mechanism and nature of bonding in the composite.

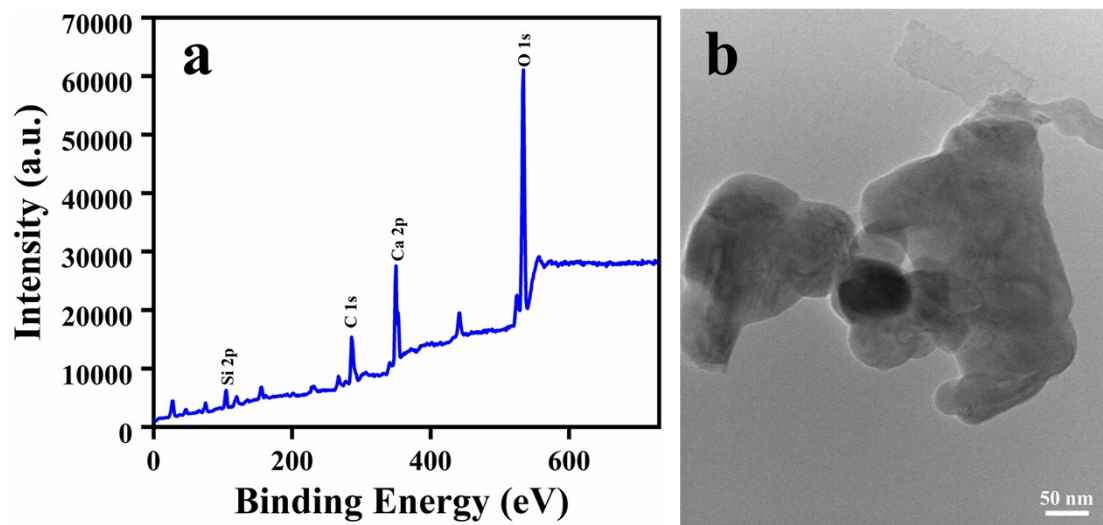
**Table S1.** Lethality assay using brine shrimp.



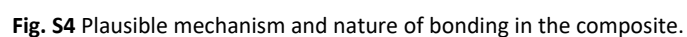
**Fig. S1** TGA thermograms of 1% BM-Alg (red curve), 3% BM-Alg (black curve), and 5% BM-Alg (purple curve) composite.



**Fig. S2** BET (surface area analysis) and BJH (pore size distribution) of a) 1% (red curve), b) 3% (black curve), c) 5% (purple curve) BM-Alg, and d) 1% BM-Alg 700 °C (blue curve).



**Fig. S3** a) XPS survey spectrum and b) TEM images of 1% BM-Alg 700 °C.



Sr. No.	Sample name	Concentration of sample	Shrimp Survived			Total number of shrimp used	The number of shrimp survived	Percentage mortality
			T1	T2	T3			
1.	Control	-	10	10	10	30	30	00
2.	1% BM-Alg	10 µg	09	09	08	30	26	13.33
		100 µg	08	07	08	30	23	23.33
		1000 µg	06	06	07	30	19	36.66
3.	1% BM-Alg 700 °C	10 µg	09	10	09	30	28	3.33
		100 µg	08	07	09	30	24	26.66
		1000 µg	06	07	06	30	19	36.66