

Supplementary Information (SI)

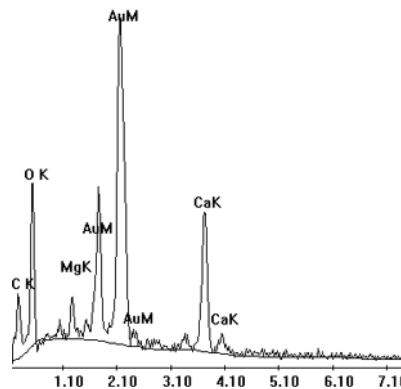
Biomimetic Synthesis of Monodispersed Spheres of Amorphous Calcium Carbonate Spherules

Parayil Kumaran Ajikumar[†], Ling Guan Wong[‡], Gayathri Subramaniam[‡],
Rajamani Lakshminarayanan[‡], Suresh Valiyaveetil^{*†‡}

1. Energy dispersive X-ray Scattering (EDXS) data of calcium carbonate crystals grown with different Ca:Mg ratios: The observed Wt % shows that the magnesium content was increased with increase in Ca:Mg ratio.

Ca:Mg = 1:3

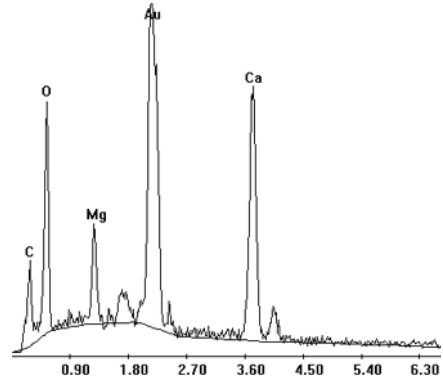
Elem	Wt %	At %	K-Ratio	Z	A	F
C K	13.68	32.79	0.0454	1.1364	0.2920	1.0004
O K	25.95	46.72	0.0601	1.1159	0.2075	1.0000
MgK	1.44	1.71	0.0086	1.0675	0.5568	1.0003
AuM	41.16	6.02	0.3410	0.7479	1.1071	1.0004
CaK	17.77	12.77	0.1592	1.0433	0.8586	1.0000
Total	100.00					



Ca:Mg = 1:6

Elem Wt % At % K-Ratio Z A F

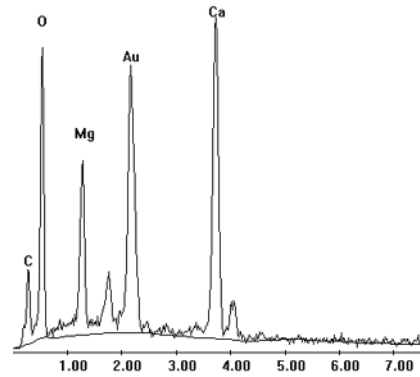
C K	8.97	21.58	0.0279	1.1170	0.2778	1.0005
O K	28.07	50.66	0.0544	1.0979	0.1766	1.0001
MgK	3.70	4.40	0.0198	1.0521	0.5080	1.0006
AuM	33.70	4.94	0.2832	0.7534	1.1149	1.0007
CaK	25.56	18.42	0.2254	1.0292	0.8569	1.0000
Total	100.00					



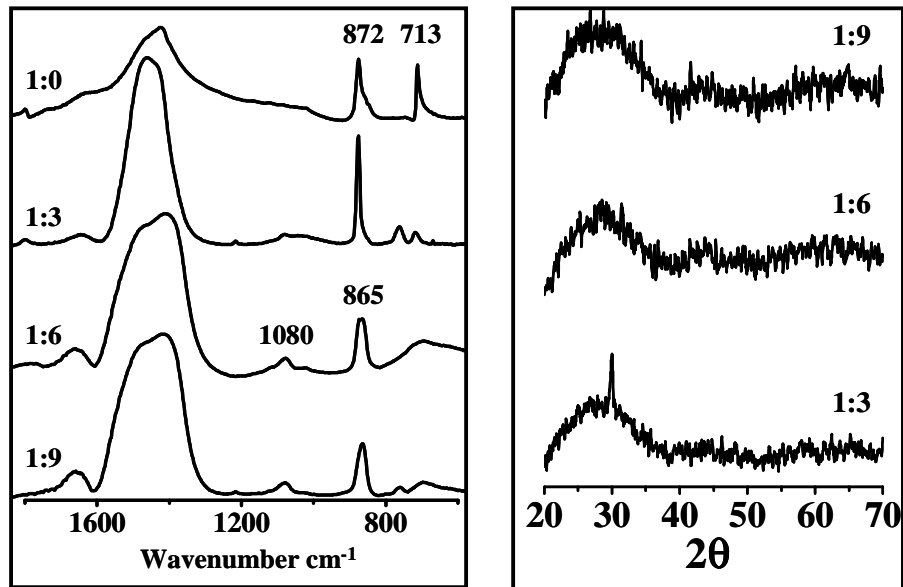
Ca:Mg = 1:9

Elem Wt % At % K-Ratio Z A F

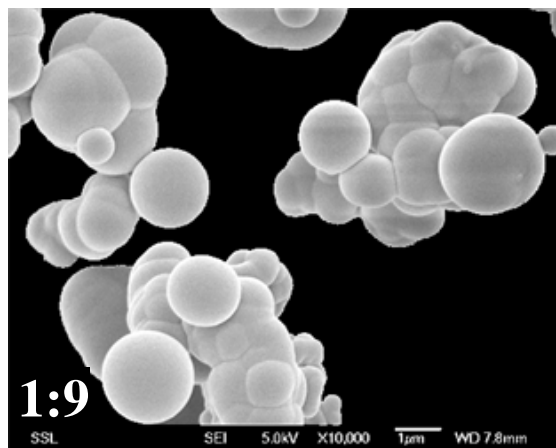
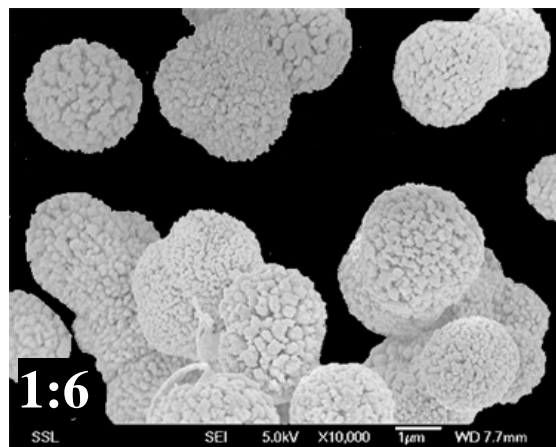
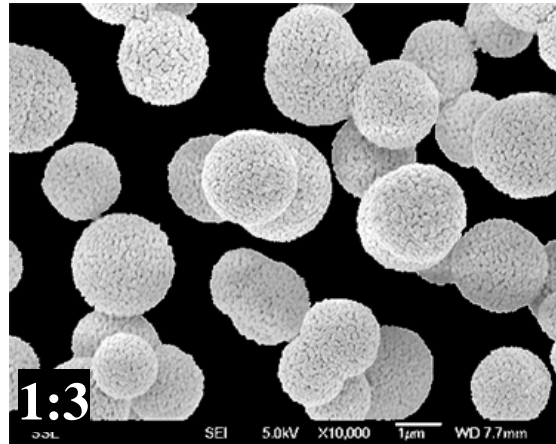
C K	10.86	21.23	0.0351	1.0839	0.2981	1.0006
O K	40.44	59.34	0.0907	1.0655	0.2105	1.0001
MgK	5.25	5.07	0.0280	1.0216	0.5216	1.0005
AuM	23.76	2.83	0.1943	0.7261	1.1258	1.0006
CaK	19.69	11.53	0.1756	0.9961	0.8956	1.0000
Total	100.0					



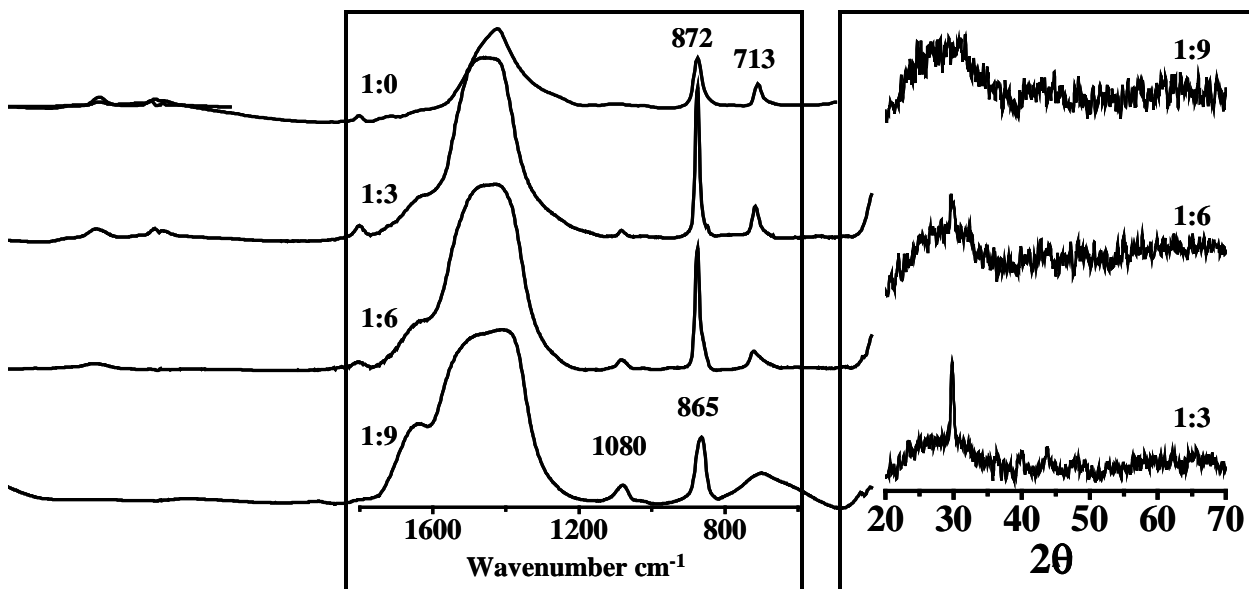
2. FTIR and XRD of the CaCO_3 grown in the presence of Mg^{2+} ions during 48h period at 4 °C, followed by one week aging at room temperature. The Ca:Mg ratio is indicated in the spectra.



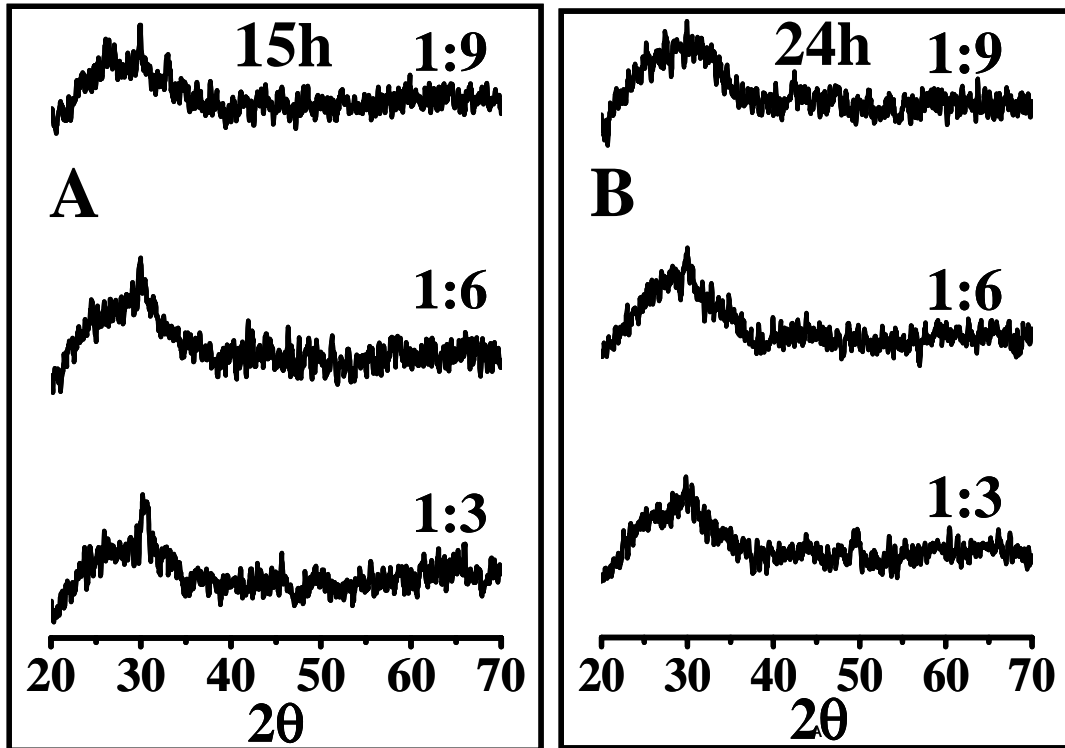
3. Representative electron micrographs of the CaCO_3 grown in the presence of Mg^{2+} ions during 24h at 4 °C followed by four weeks aging at room temperature. The Ca:Mg ratio is indicated in the spectra



4. FTIR and XRD of the CaCO_3 grown in the presence of Mg^{2+} ions during 48h at 4 °C, followed by four weeks of aging at room temperature. The Ca:Mg ratio is indicated in the spectra.



5. XRD of the CaCO_3 grown in the presence of Mg^{2+} ions during 15h (A) and 24h (B) at 4 °C, followed by one week aging in solution at room temperature. The Ca:Mg ratio is indicated in the spectra



6. XRD of the CaCO_3 grown in the presence of Mg^{2+} ions during 15h (A) and 48h (B) at 4 °C, followed by Six months aging at room temperature. The Ca:Mg ratio is indicated in the spectra.

