

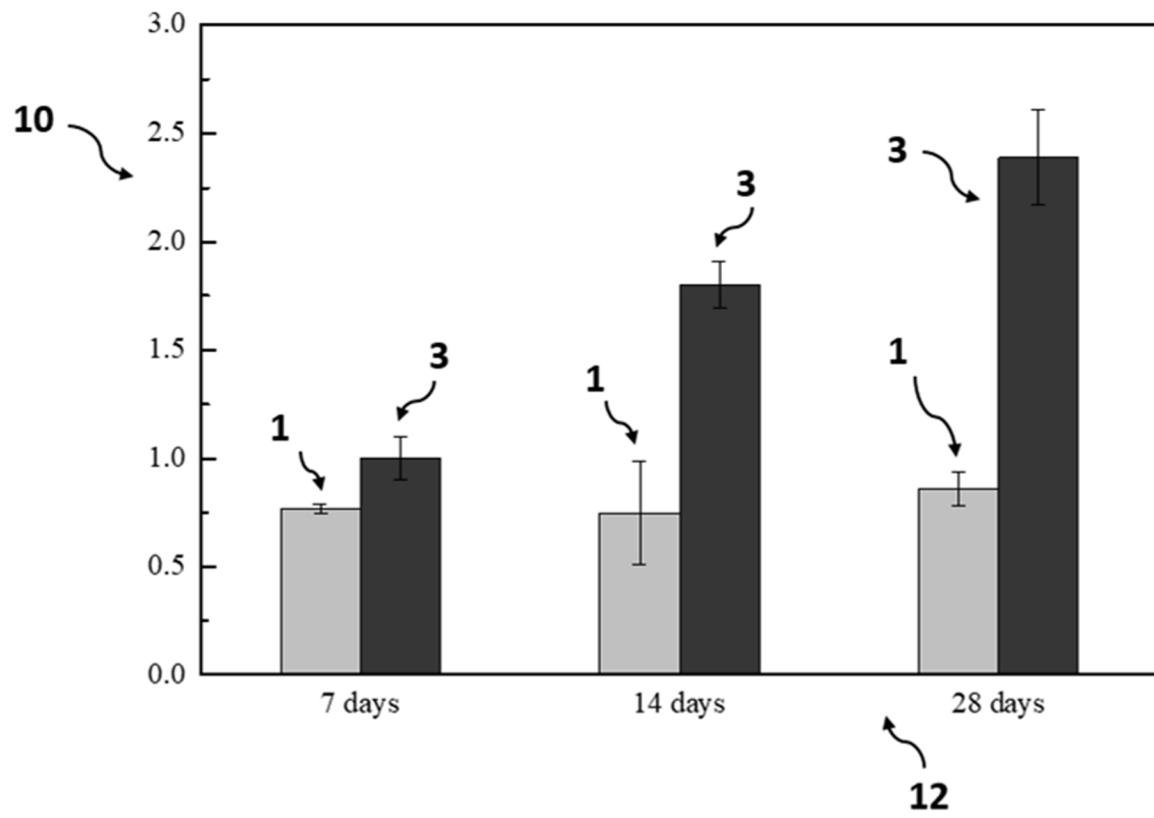
FIG. 1

FIG. 3A

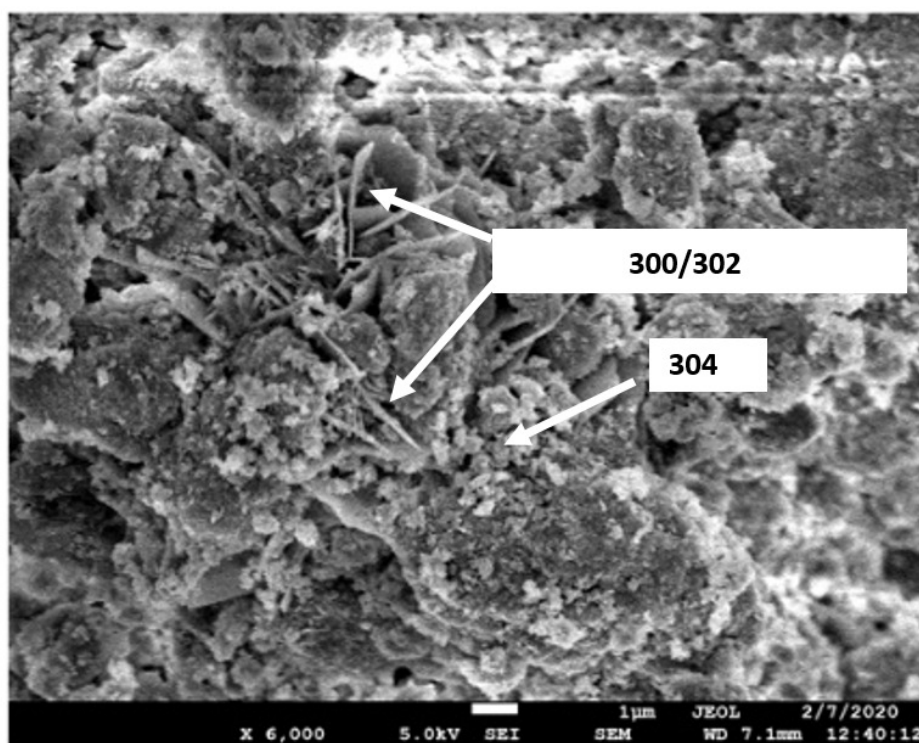


FIG. 3B

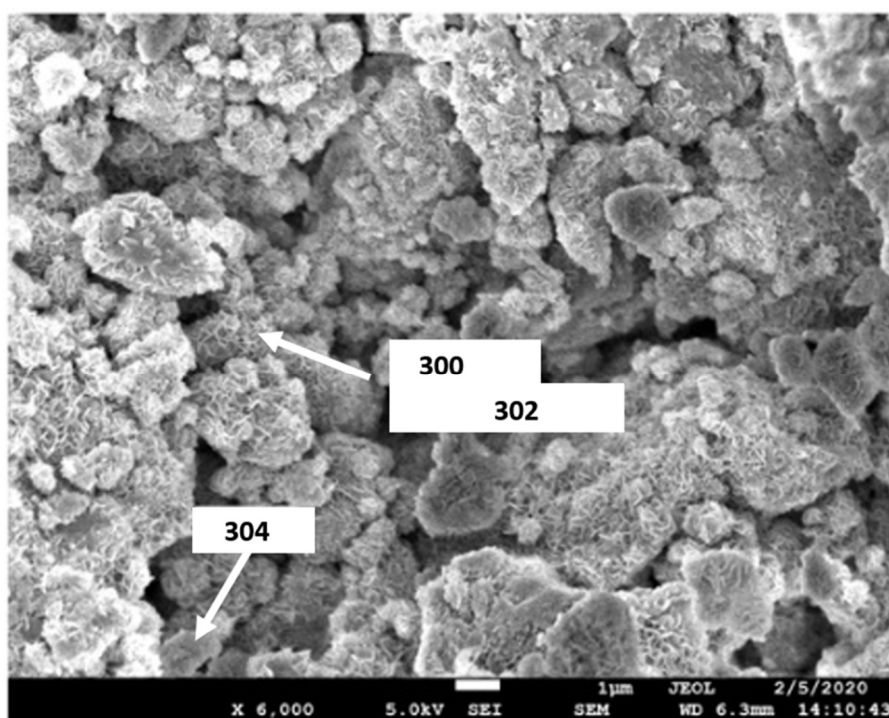


FIG. 3C

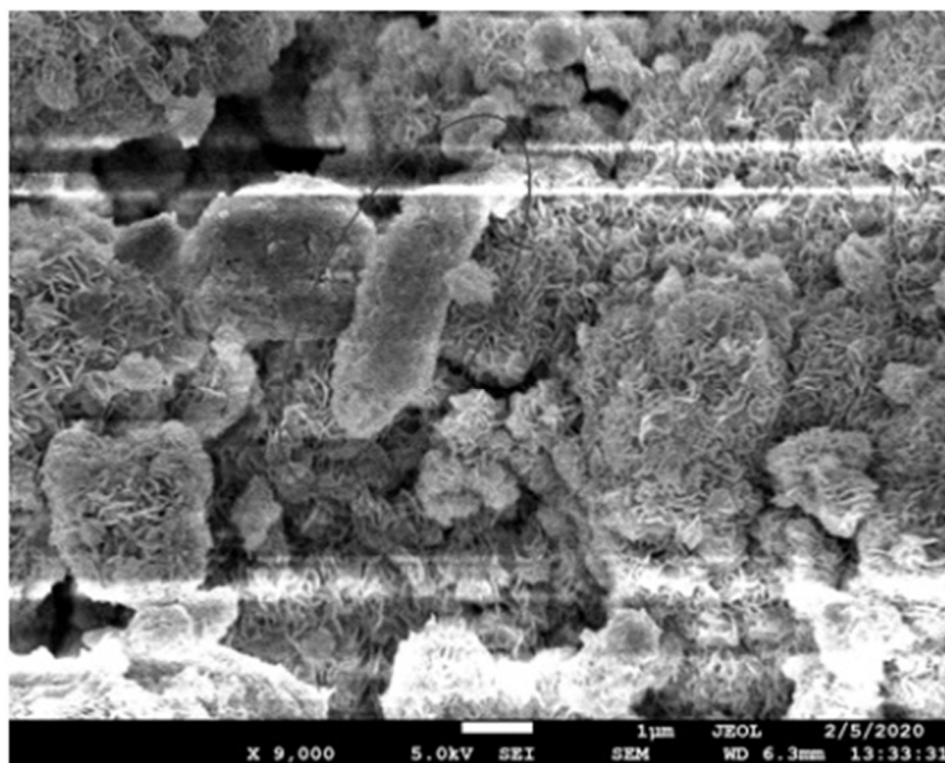


FIG. 3D

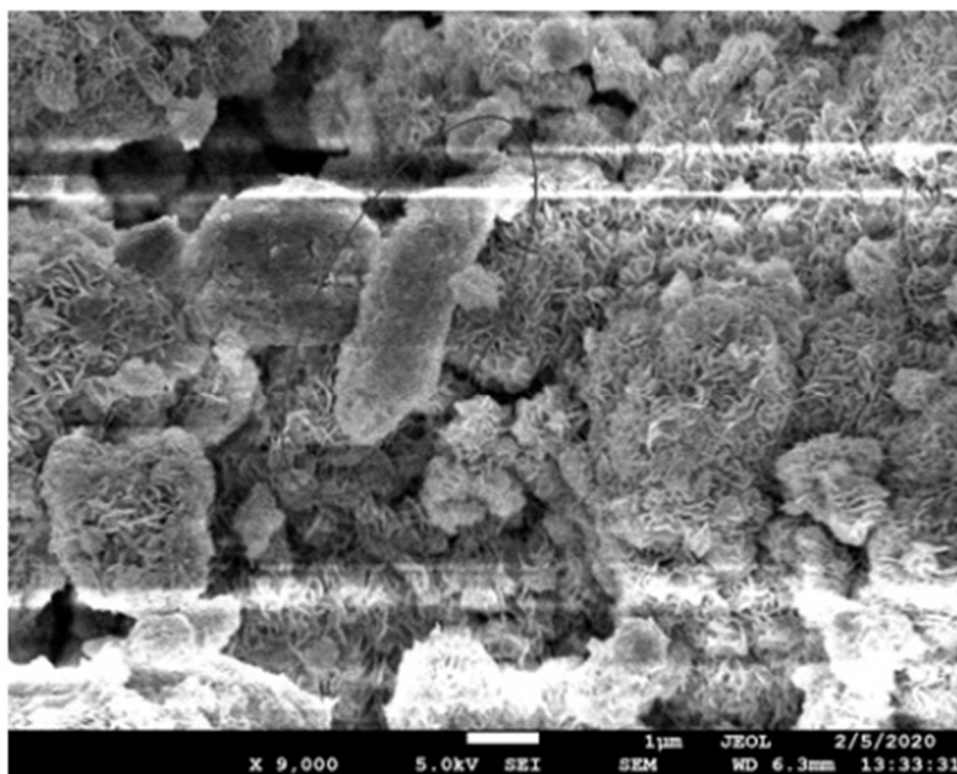


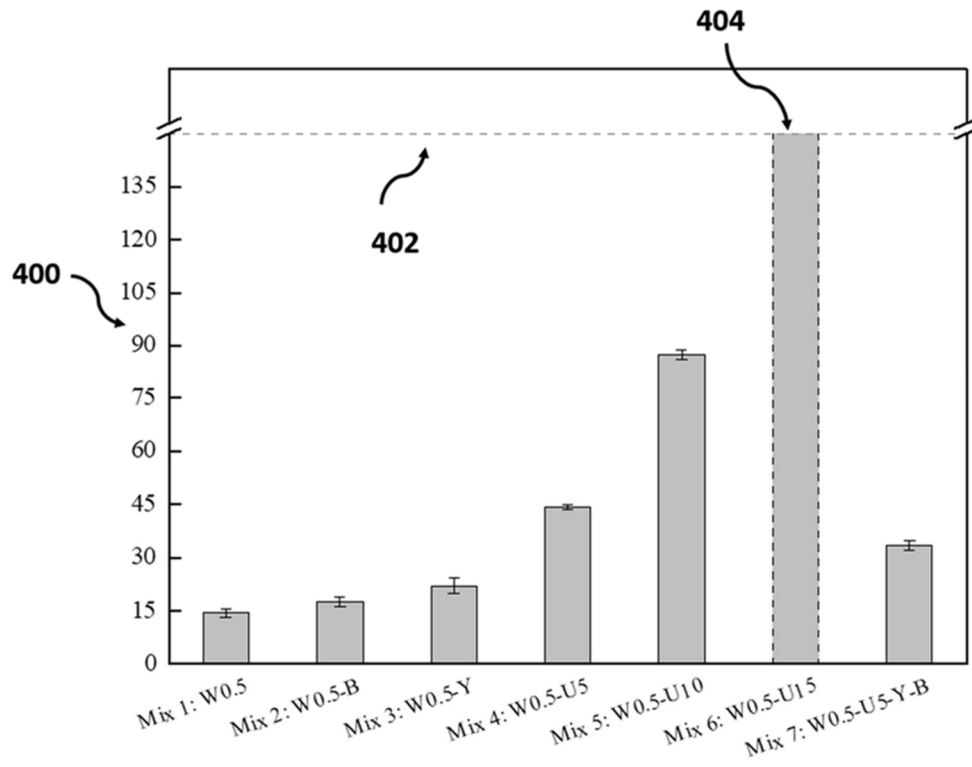
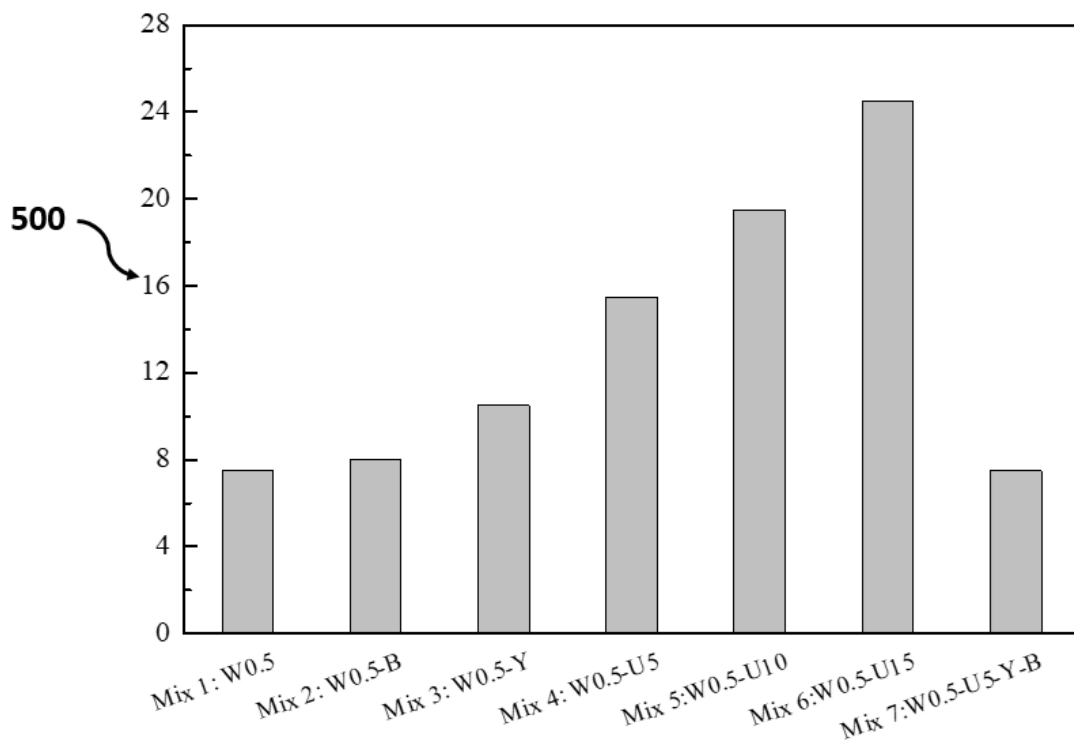
FIG. 4**FIG. 5**

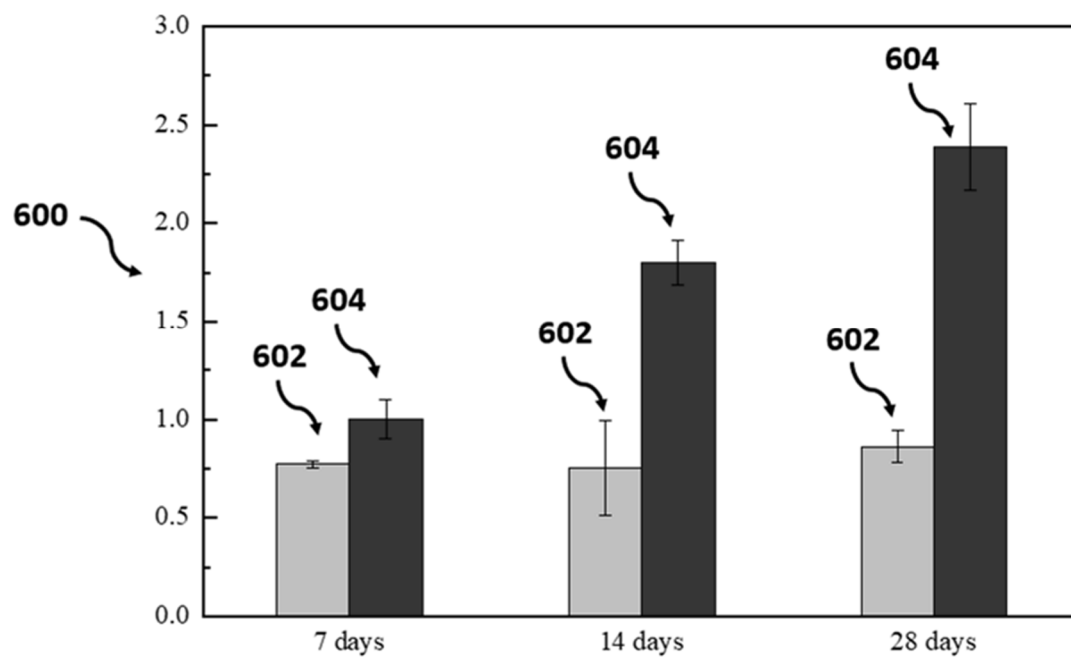
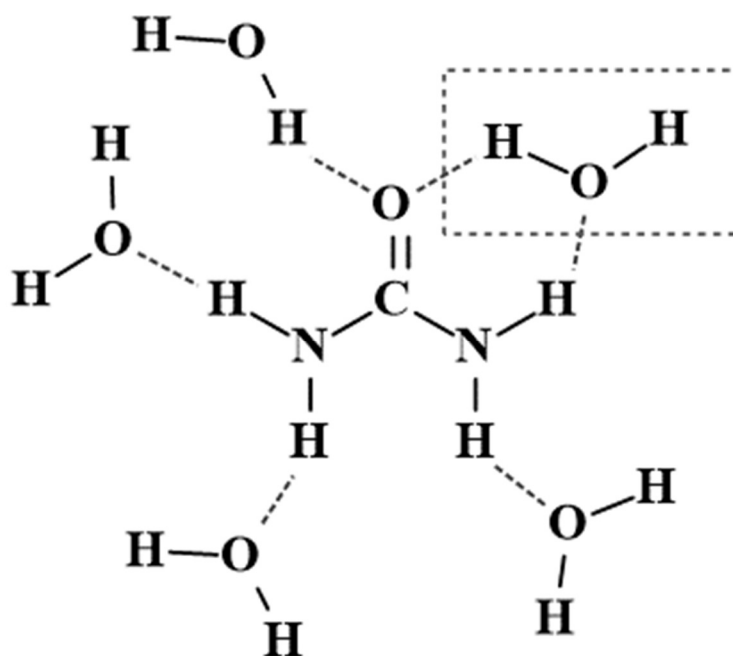
FIG. 6**FIG. 7**

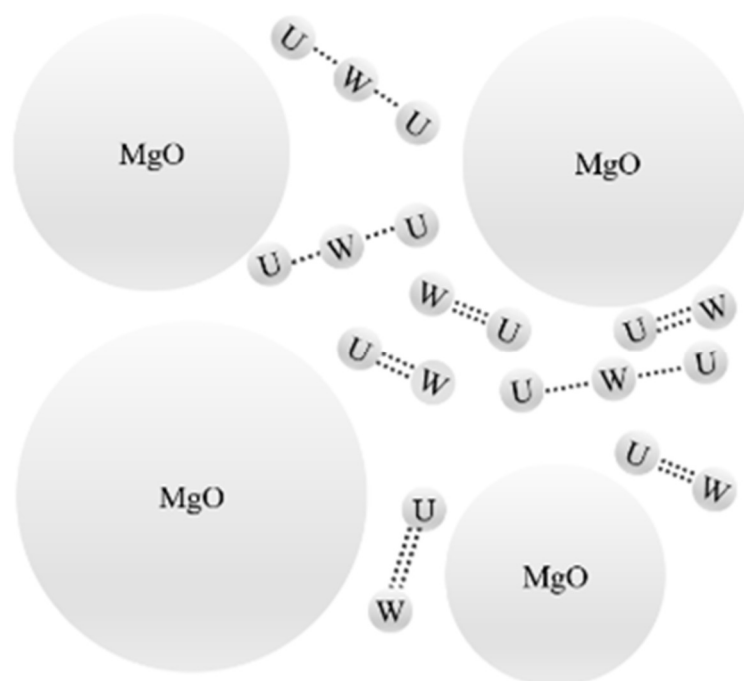
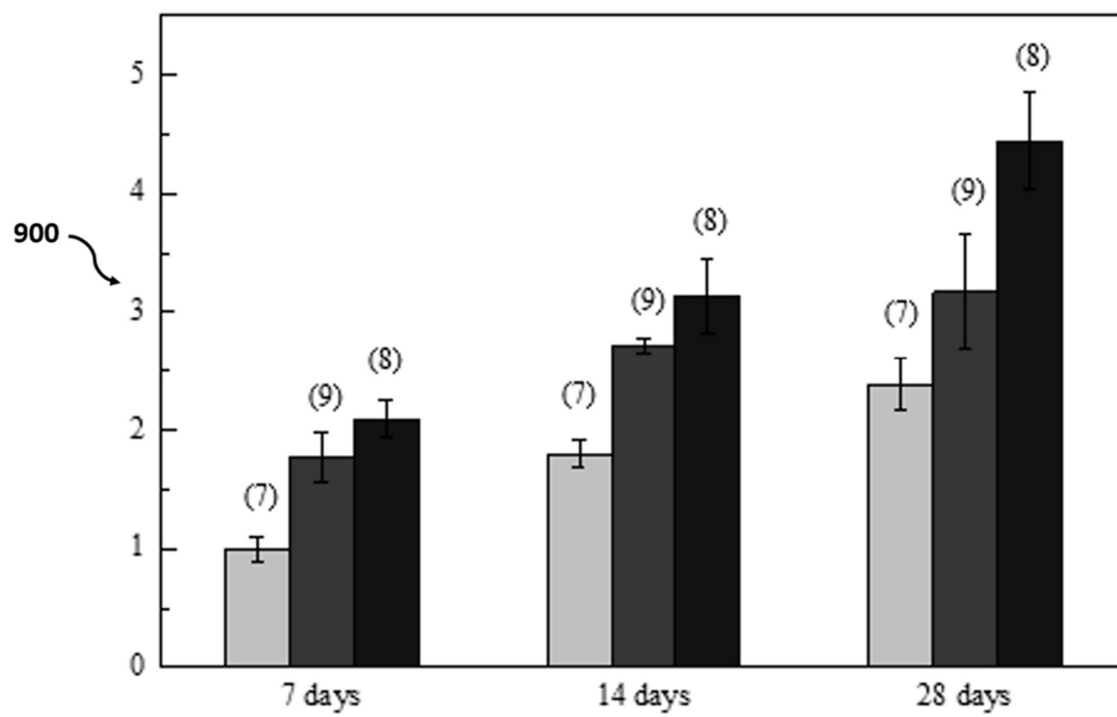
FIG. 8**FIG. 9**

FIG. 10

	Chemical composition (%)					Physical properties			
	MgO	SiO ₂	CaO	R ₂ O ₃	K ₂ O	Na ₂ O	LOI	Specific gravity (g/cm ³)	Specific surface area (m ² /g)
RMC	>91.5	2.0	1.6	1.0	-	-	4.0	3.0	16.3

FIG. 11

Mix	W/B ^a	Mixture proportion (kg/m ³)							
		RMC	Water	Bacteria	Urea 0.5 M	Urea 1 M	Urea 1.5 M	Urea 2 M	HA
CS	0.65	1000	650	–	–	–	–	–	–
U0.5M	0.7		650	355	355	–	–	–	–
U1M	0.7		650	355	–	355	–	–	–
U1.5M	0.7		650	355	–	–	355	–	–
U2M	0.7		650	355	–	–	–	355	–
HA.CS	0.65		643	–	–	–	–	–	7.0
HA.U0.5M	0.7		643	351.2	351.2	–	–	–	7.6
HA.U1M	0.7		643	351.2	–	351.2	–	–	7.6
HA.U1.5M	0.7		643	351.2	–	–	351.2	–	7.6
HA.U2M	0.7		643	351.2	–	–	–	351.2	7.6

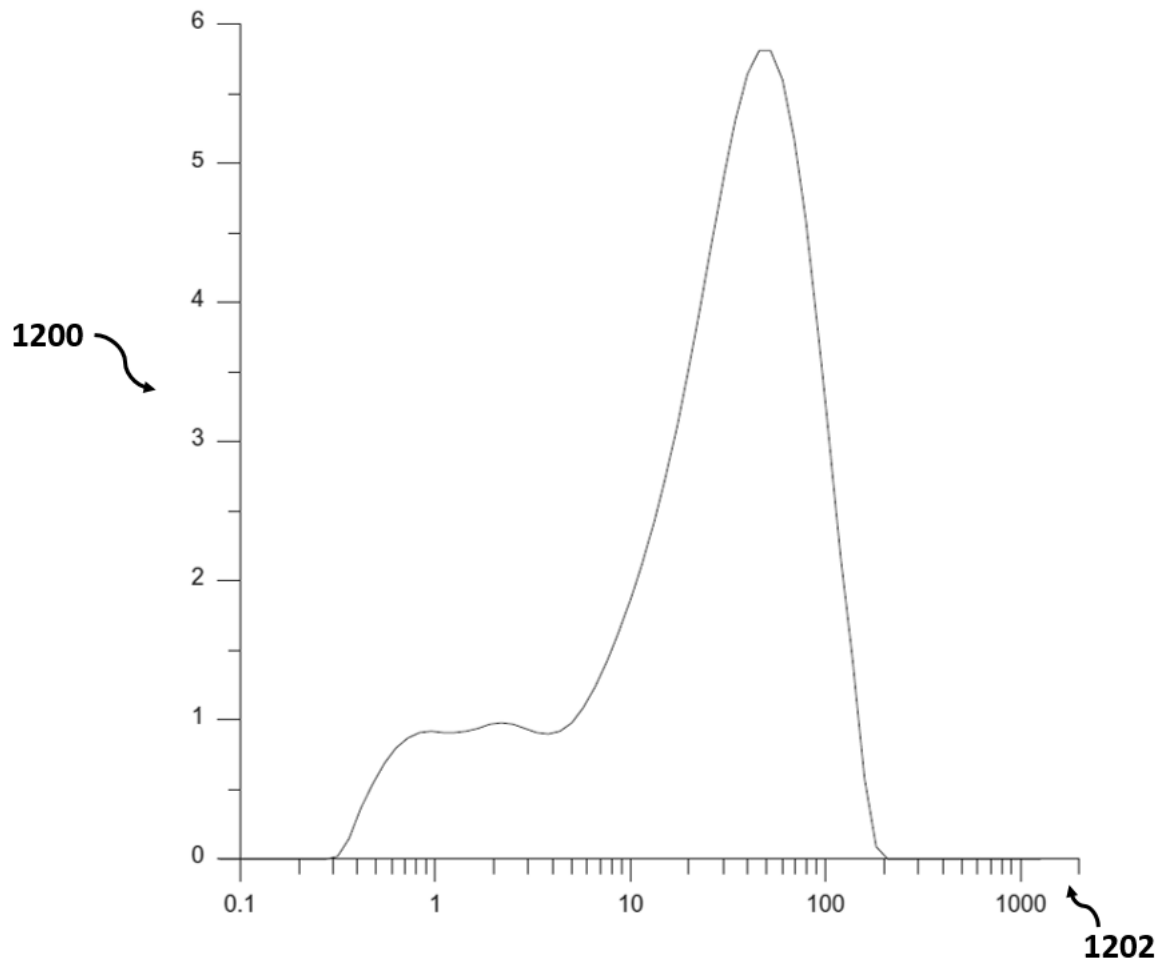
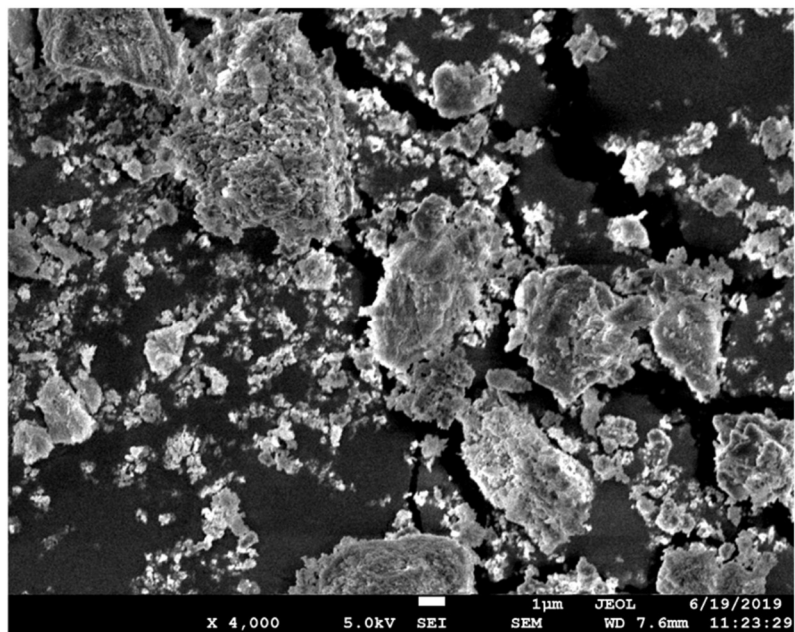
FIG. 12**FIG. 13**

FIG. 14

Mix	pH	Flow (%)	Setting times (h)	
			Initial	Final
CS	11.74	181	26.5	33.3
U0.5M	10.23	168	22.5	30.0
U1M	9.96	172	22.8	28.0
U1.5M	10.23	161	15.8	21.0
U2M	10.24	162	4.7	6.6
HA.CS	9.32	196	22.3	26.5
HA.U0.5M	10.02	172	18.3	23.3
HA.U1M	9.97	169	10.0	19.5
HA.U1.5M	10.04	167	7.8	17.0
HA.U2M	10.02	166	7.5	11.5

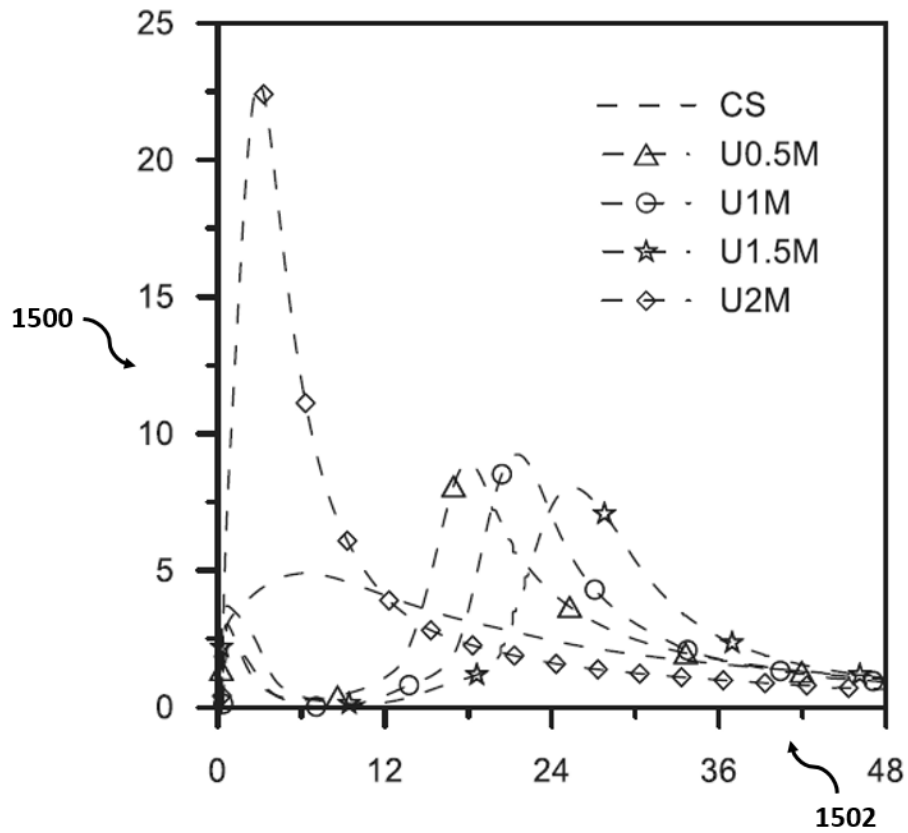
FIG. 15A

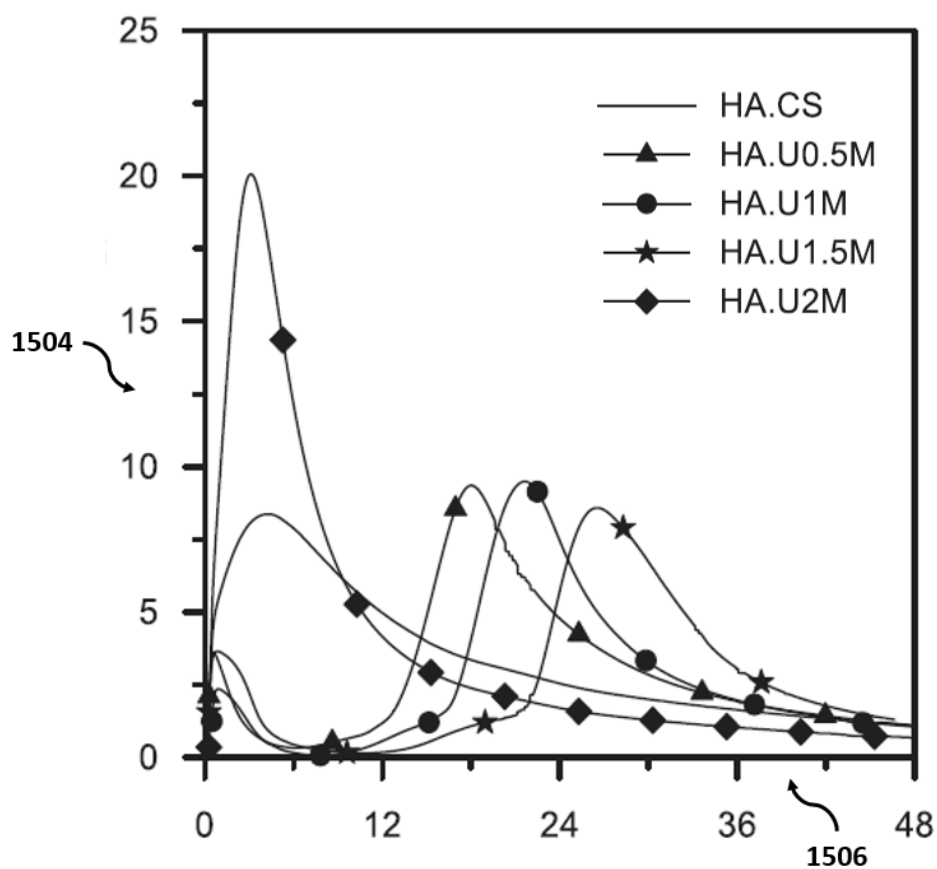
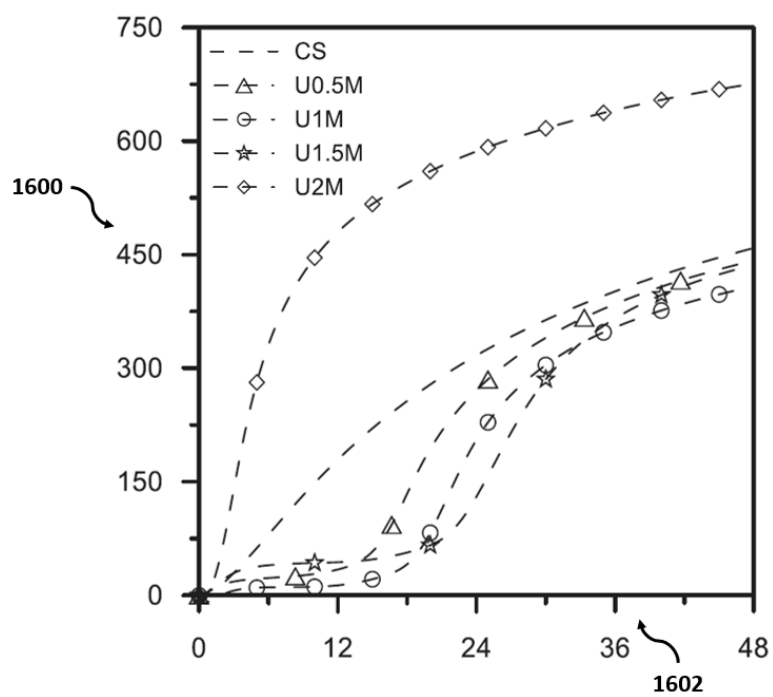
FIG. 15B**FIG. 16A**

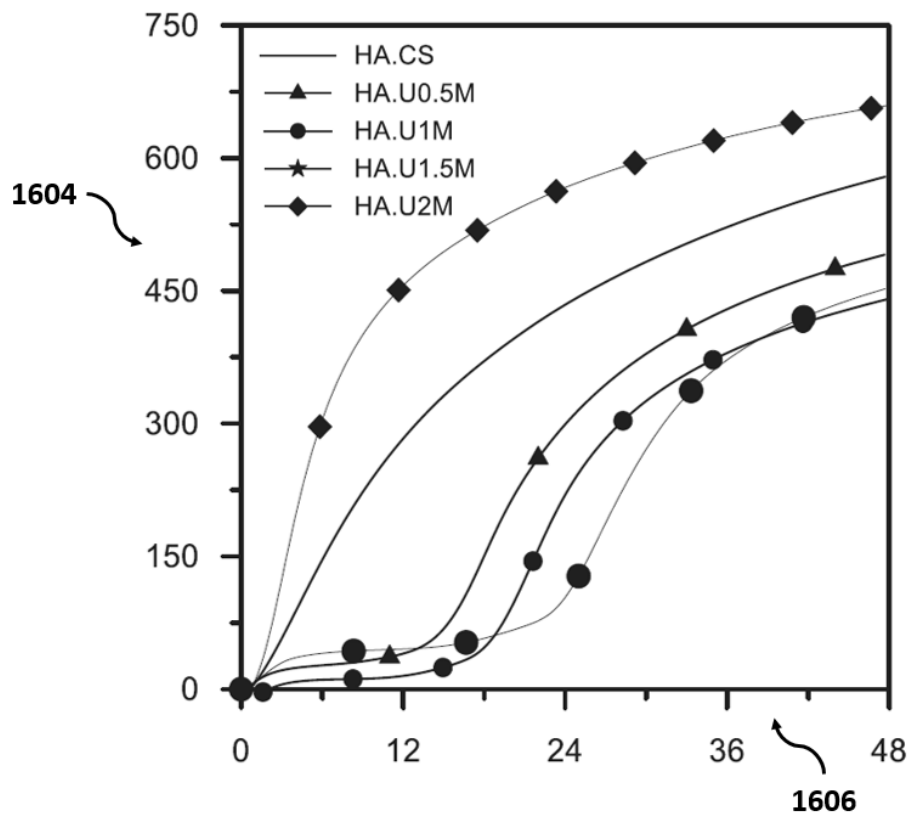
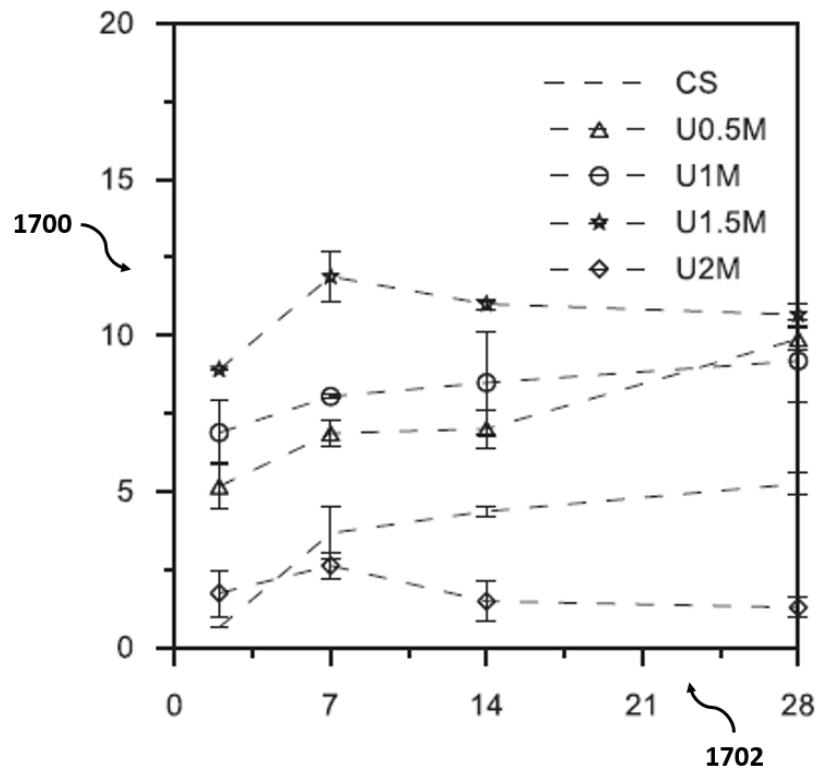
FIG. 16B**FIG. 17A**

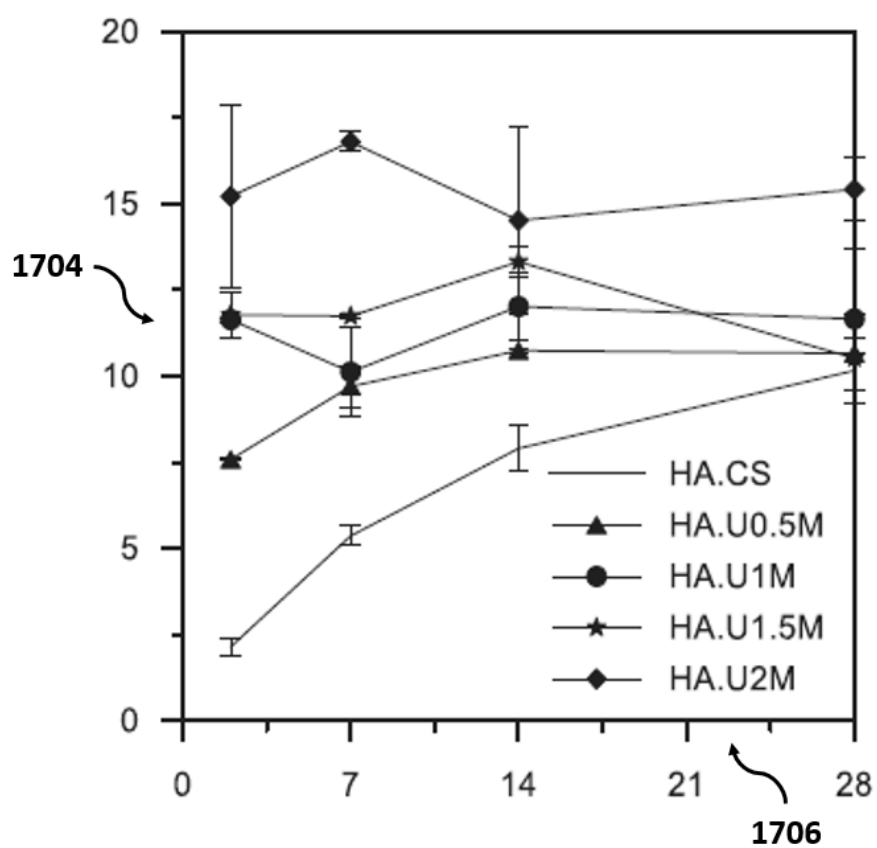
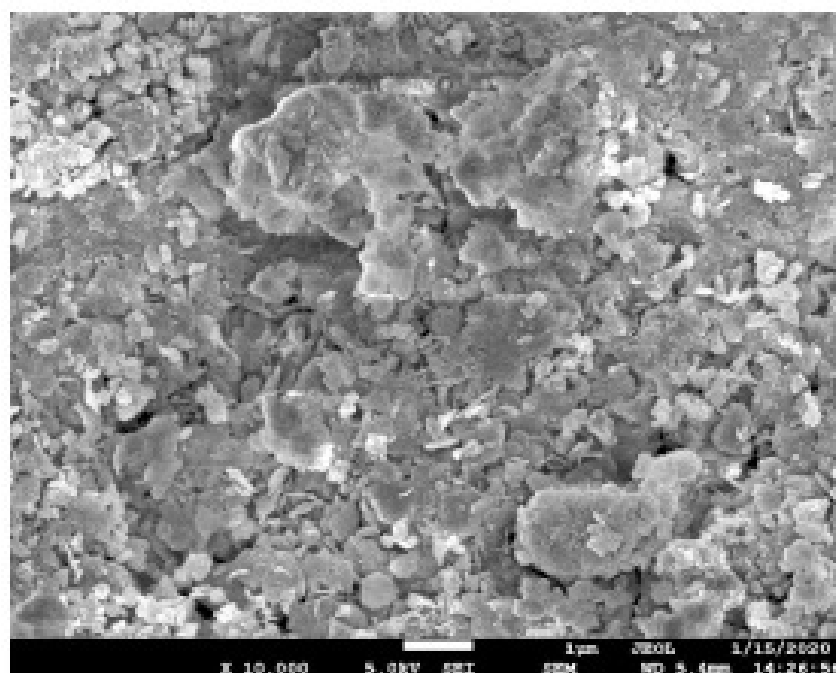
FIG. 17B**FIG. 18A**

FIG. 18B

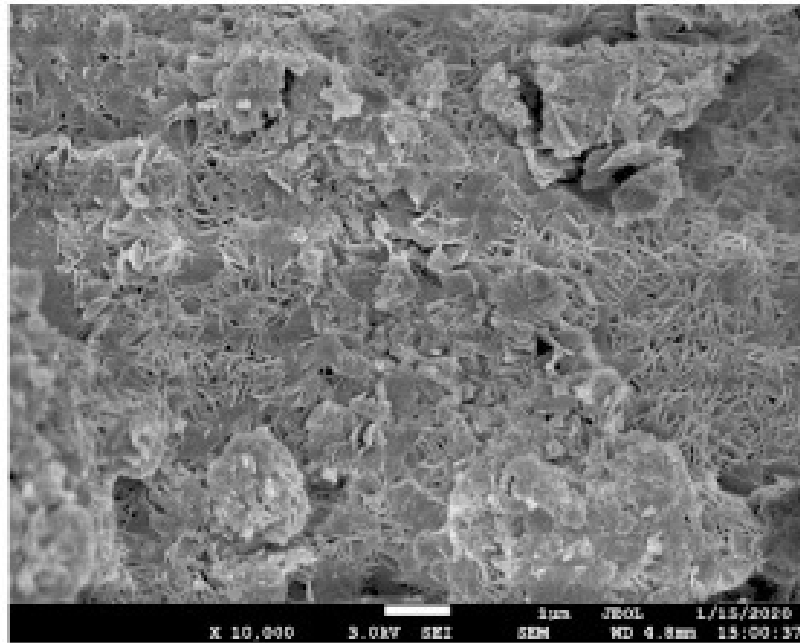


FIG. 18C

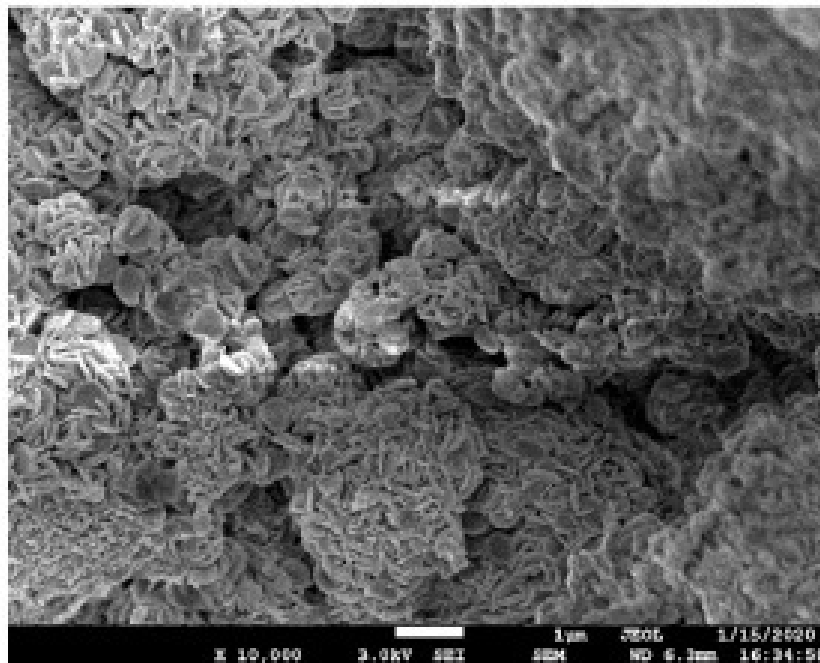


FIG. 18D

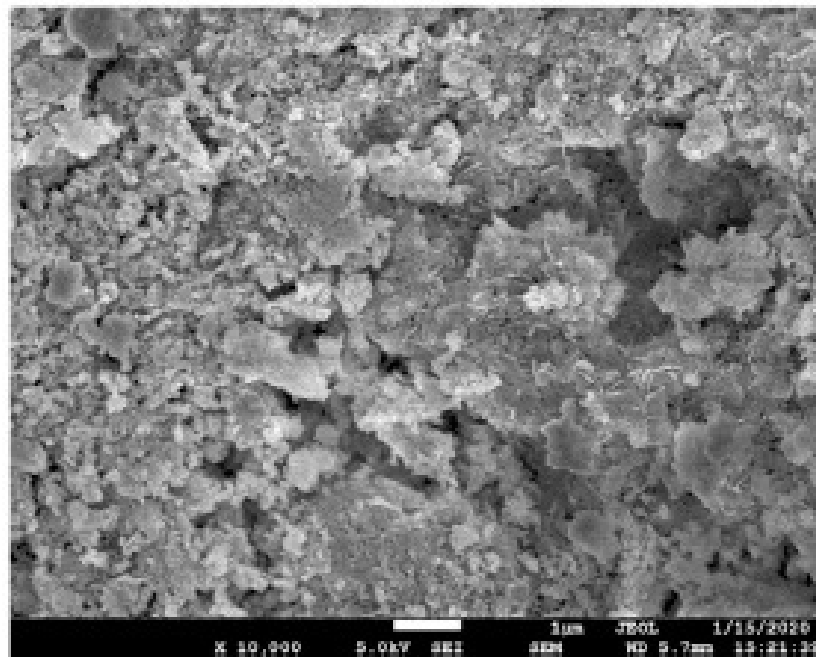


FIG. 18E

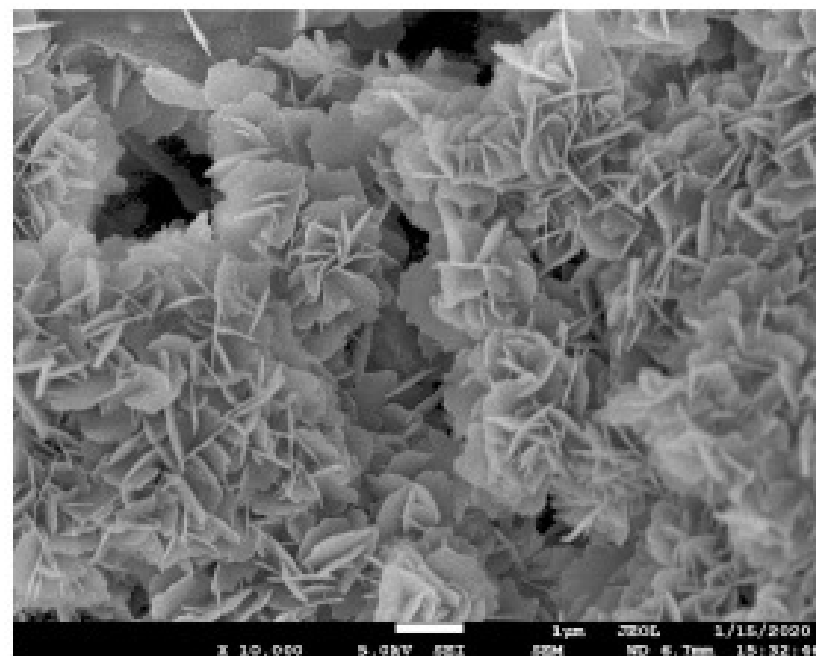


FIG. 18F

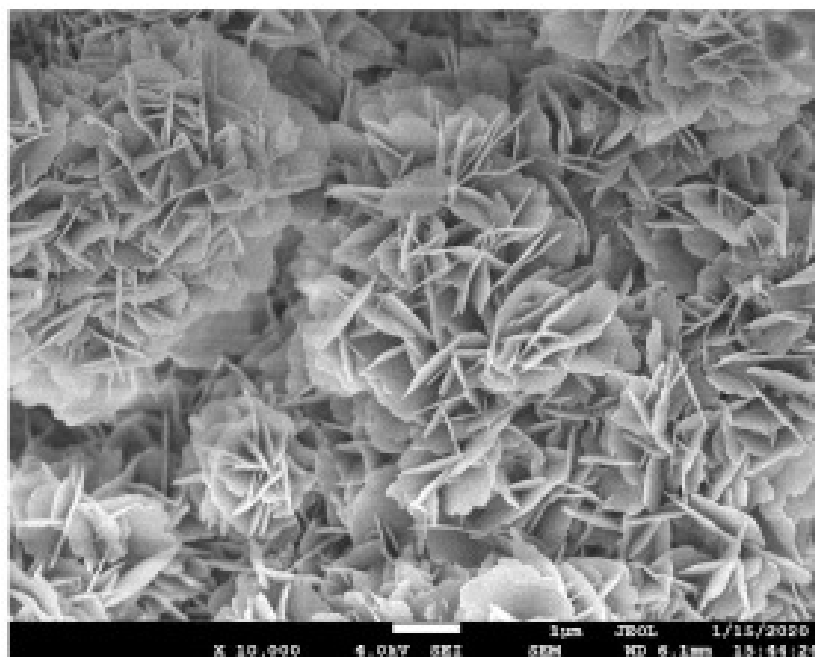


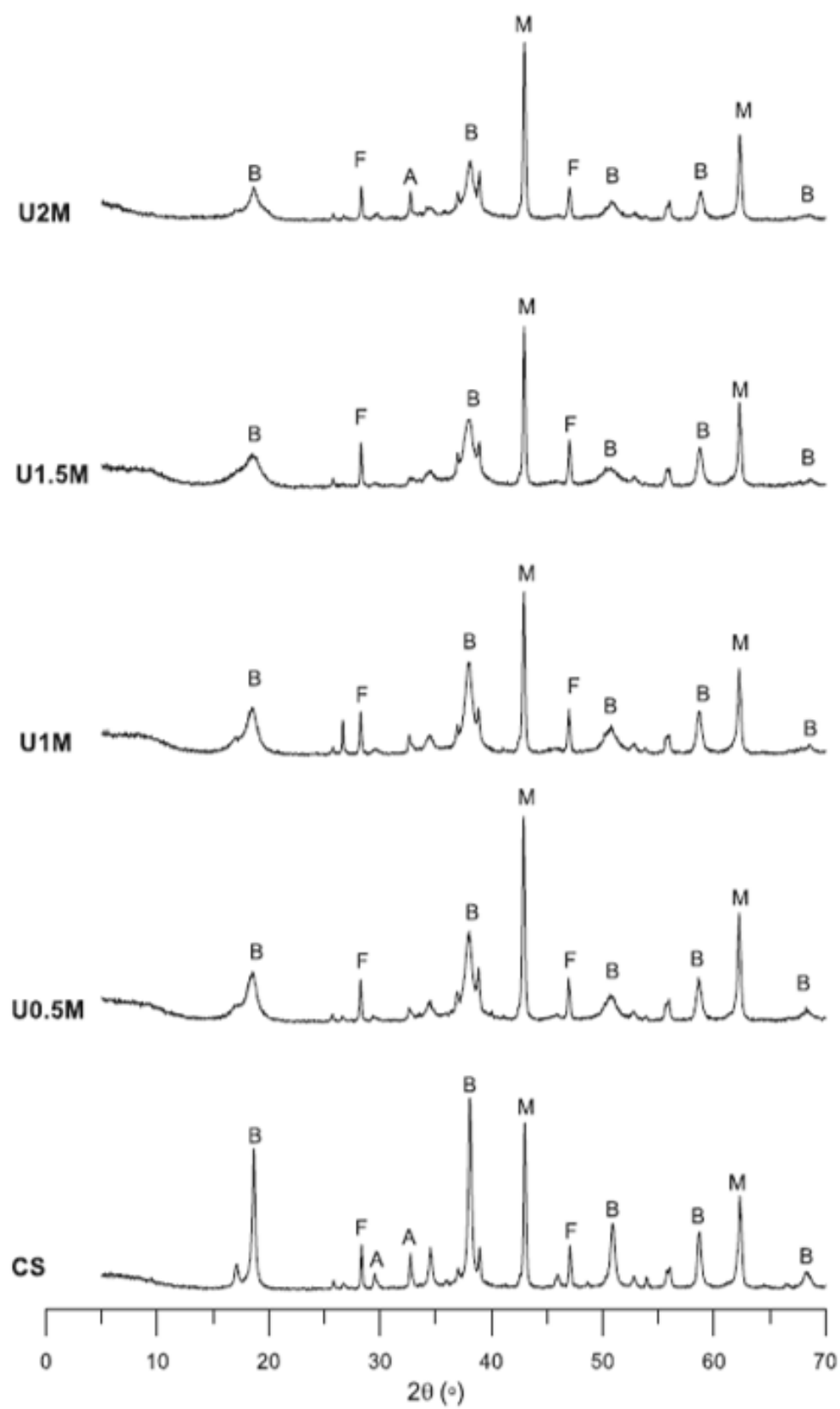
FIG. 19A

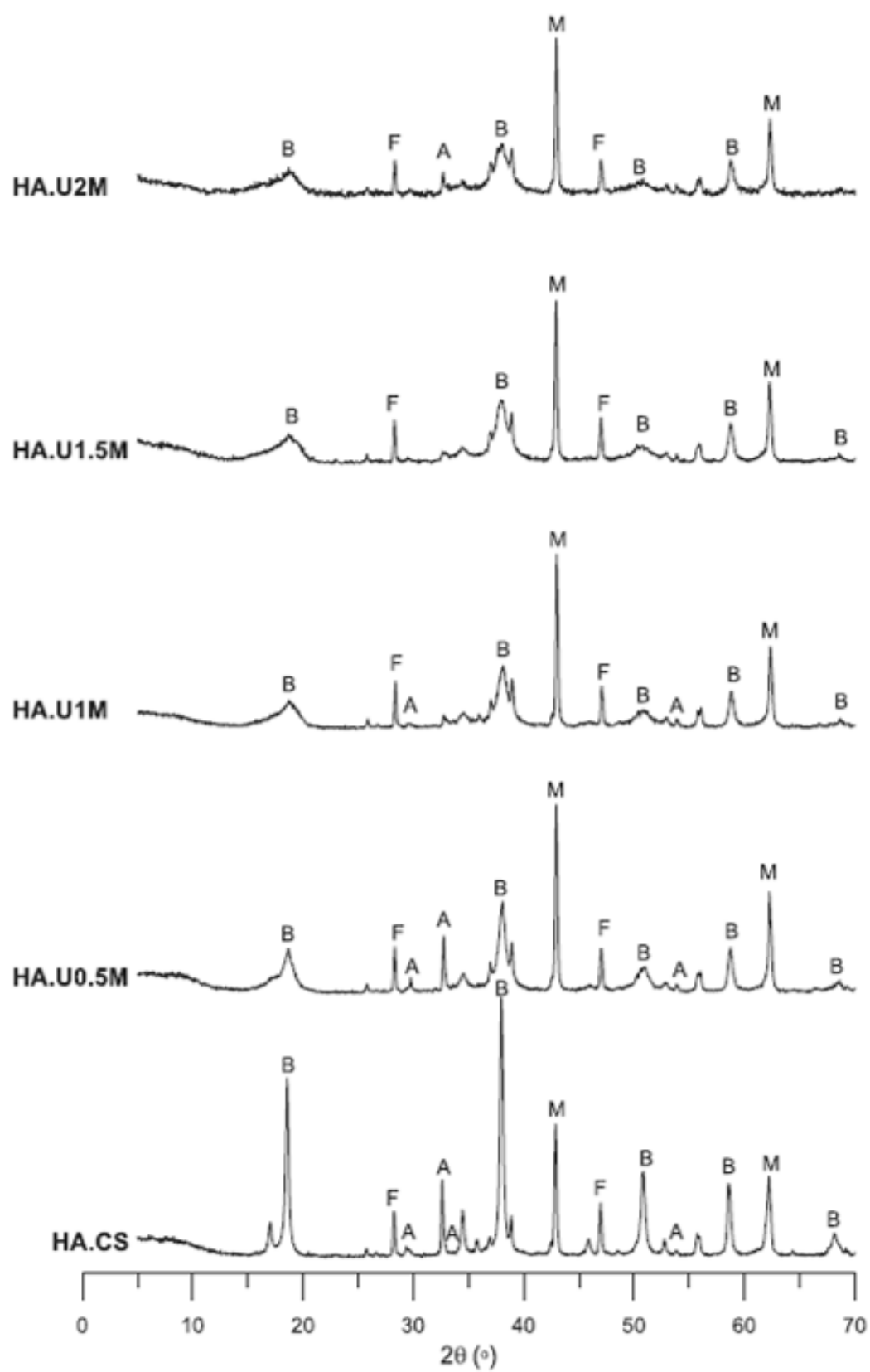
FIG. 19B

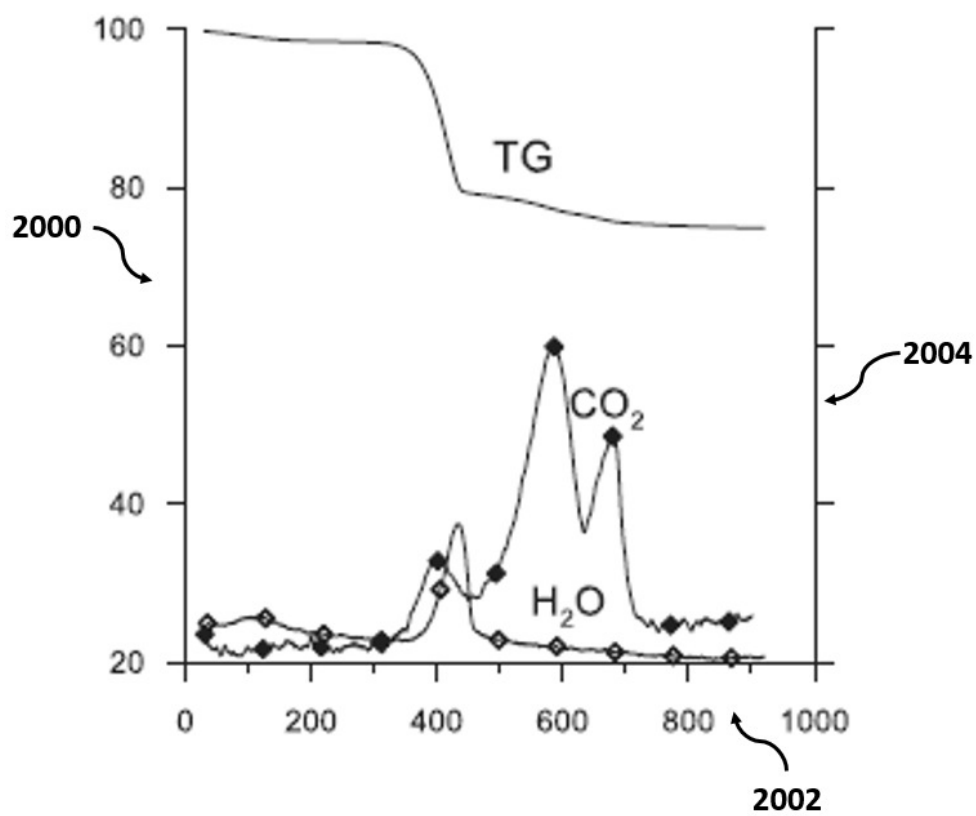
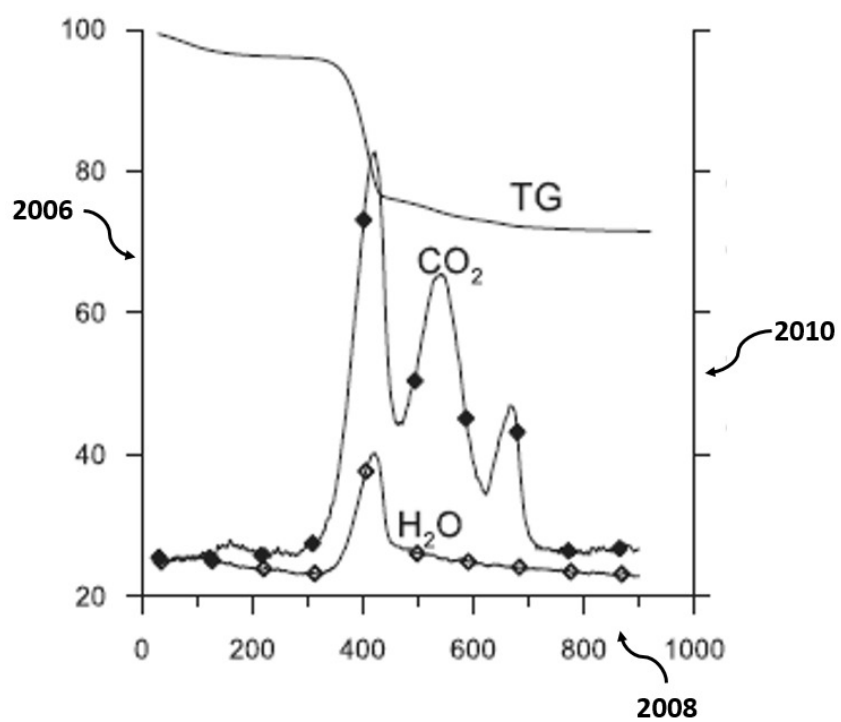
FIG. 20A**FIG. 20B**

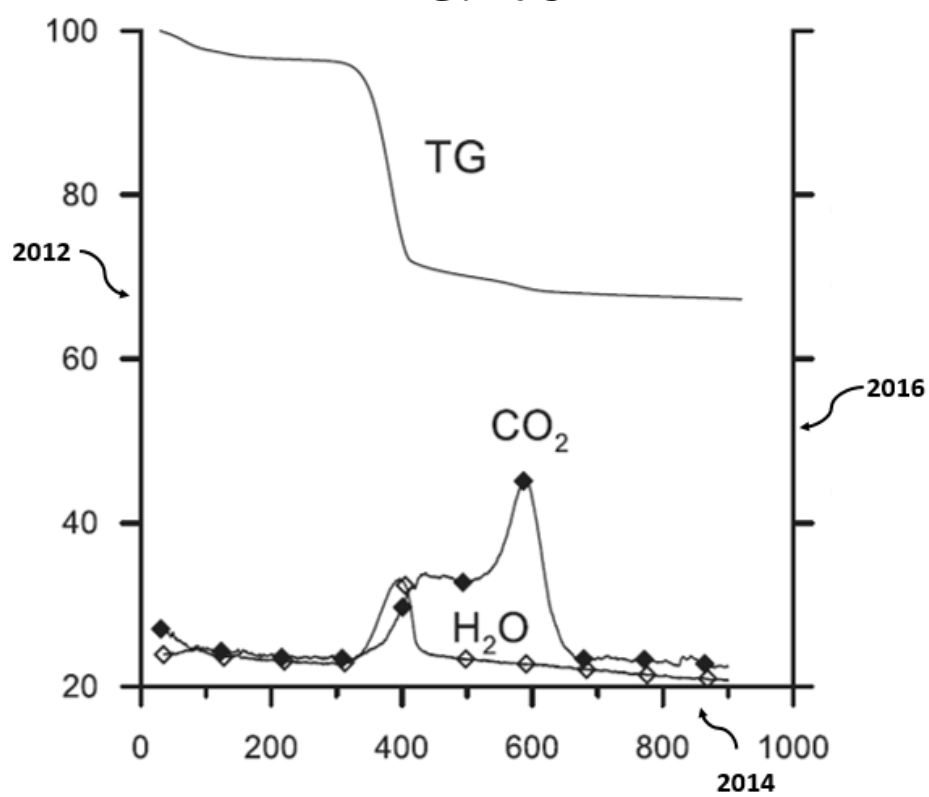
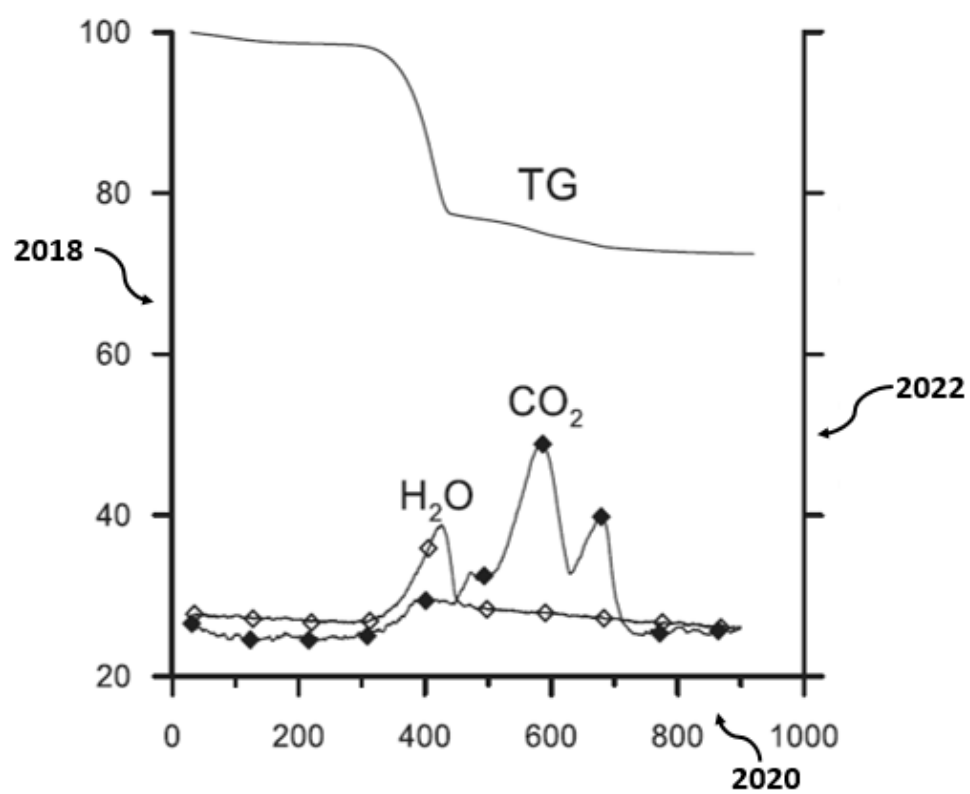
FIG. 20C**FIG. 20D**

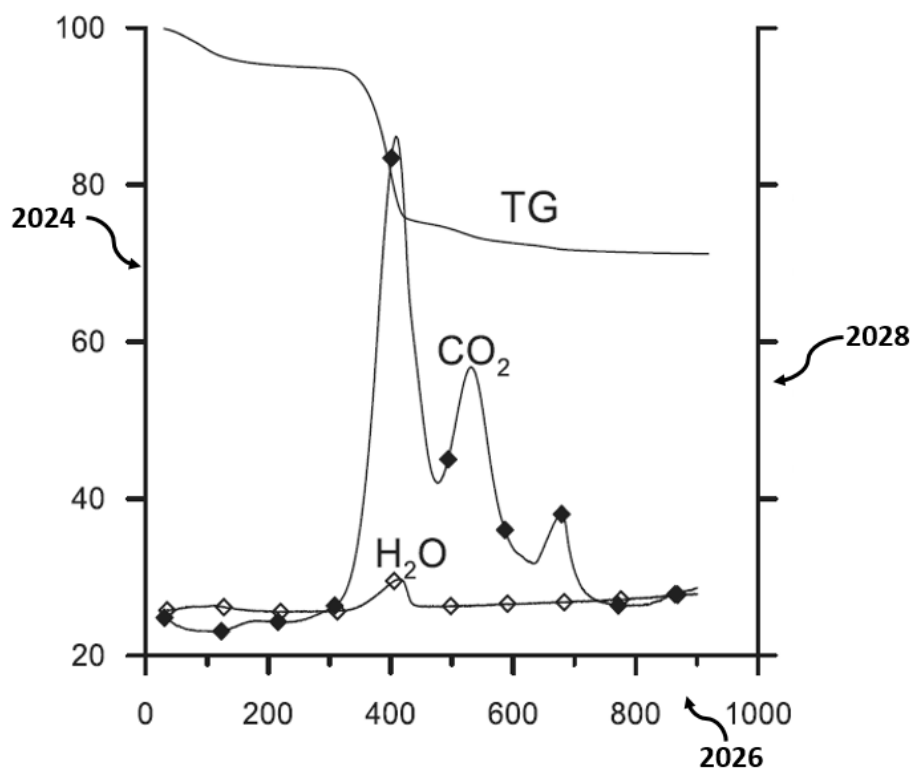
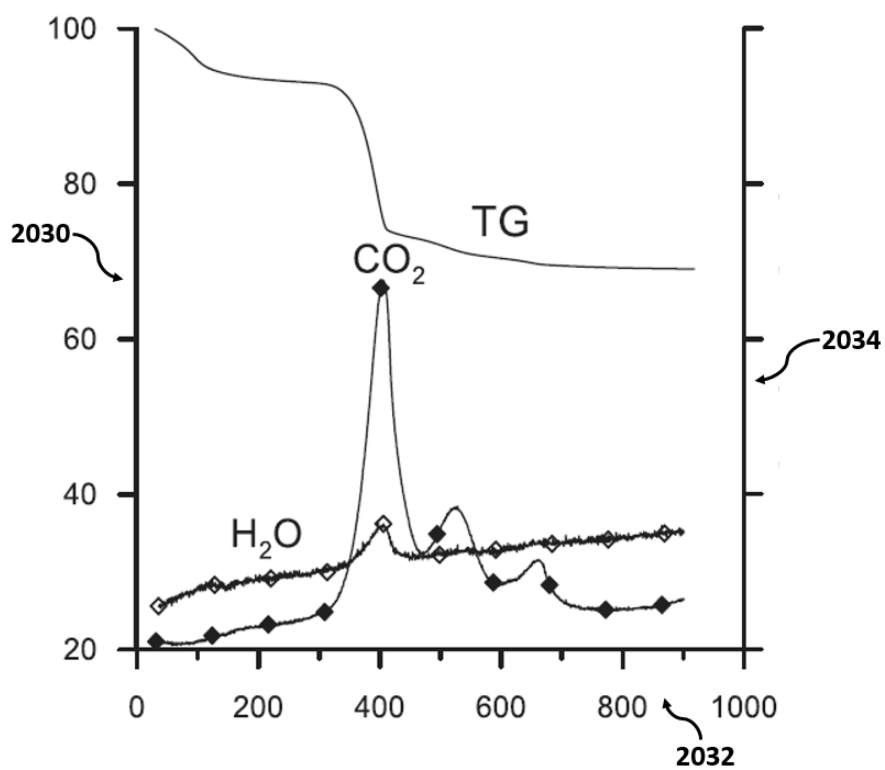
FIG. 20E**FIG. 20F**

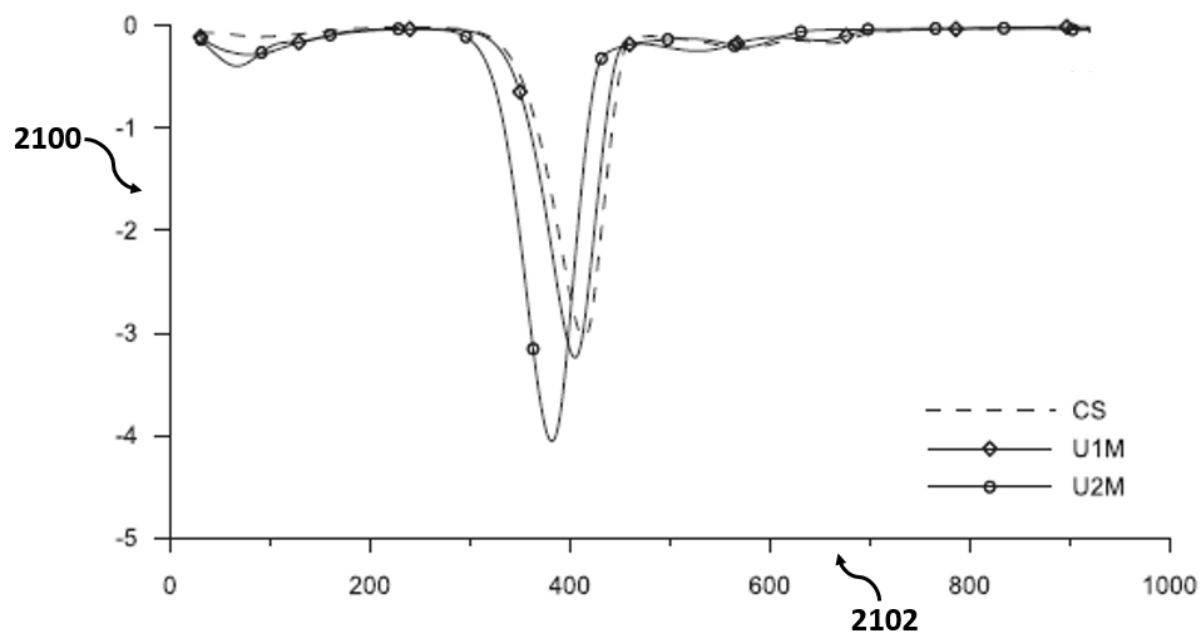
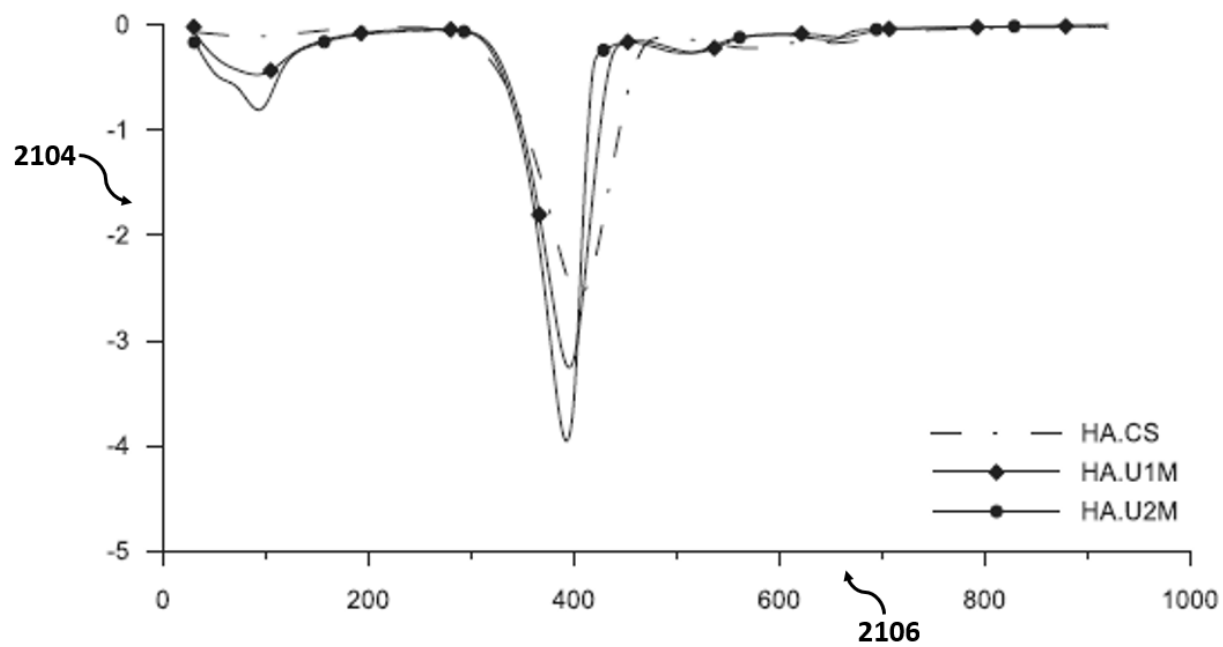
FIG. 21A**FIG. 21B**

FIG. 22

Mix	Mass loss (%)			
	Dehydration	Dehydroxylation	Decarbonation	Total
CS	1.3	12.7	11.1	25.1
U1M	3.2	6.9	18.5	28.5
U2M	3.4	16.8	13.4	33.6
HA.CS	1.5	12.3	13.7	27.5
HA.U1M	5.0	5.1	19.1	29.2
HA.U2M	6.8	6.7	17.4	30.9

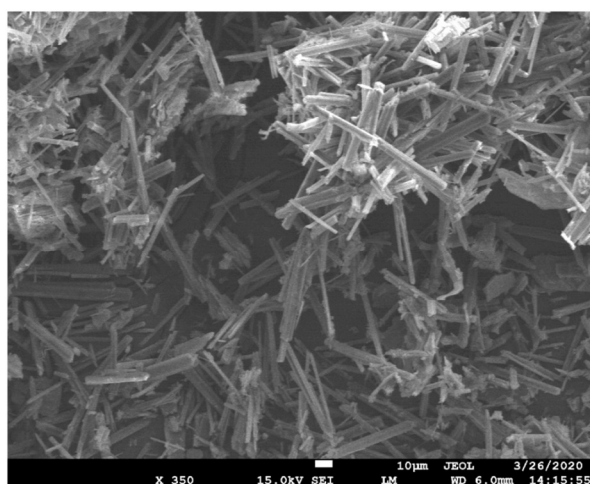
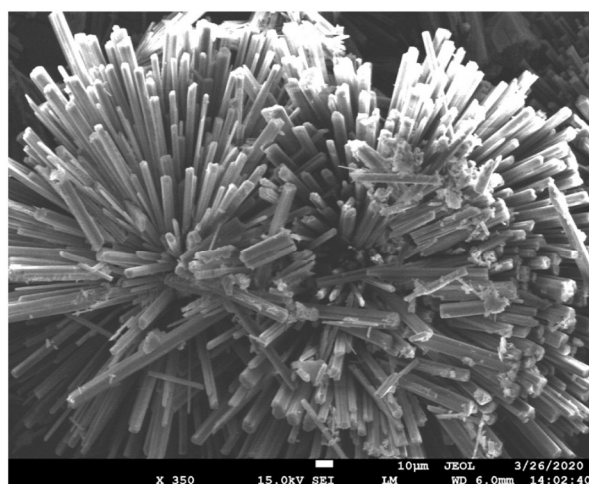
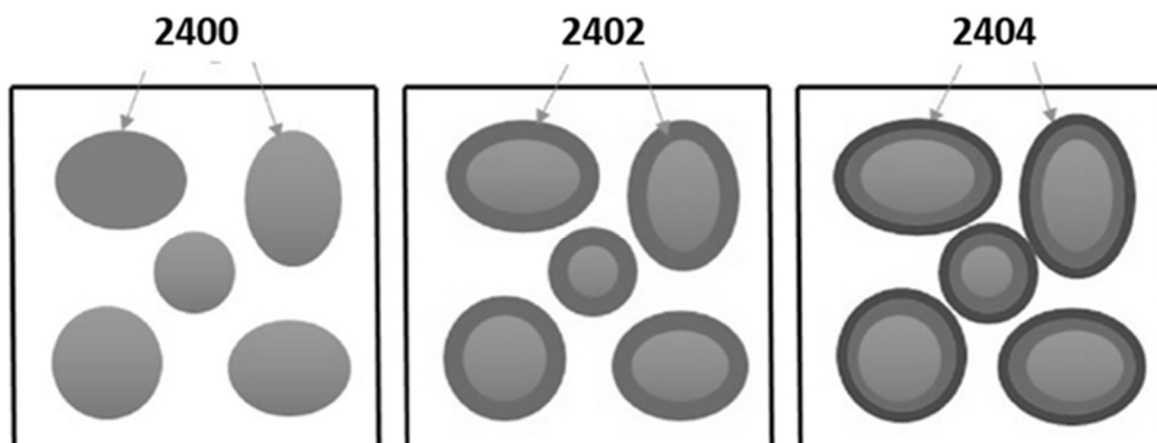
FIG. 23A**FIG. 23B****FIG. 24**

FIG. 25

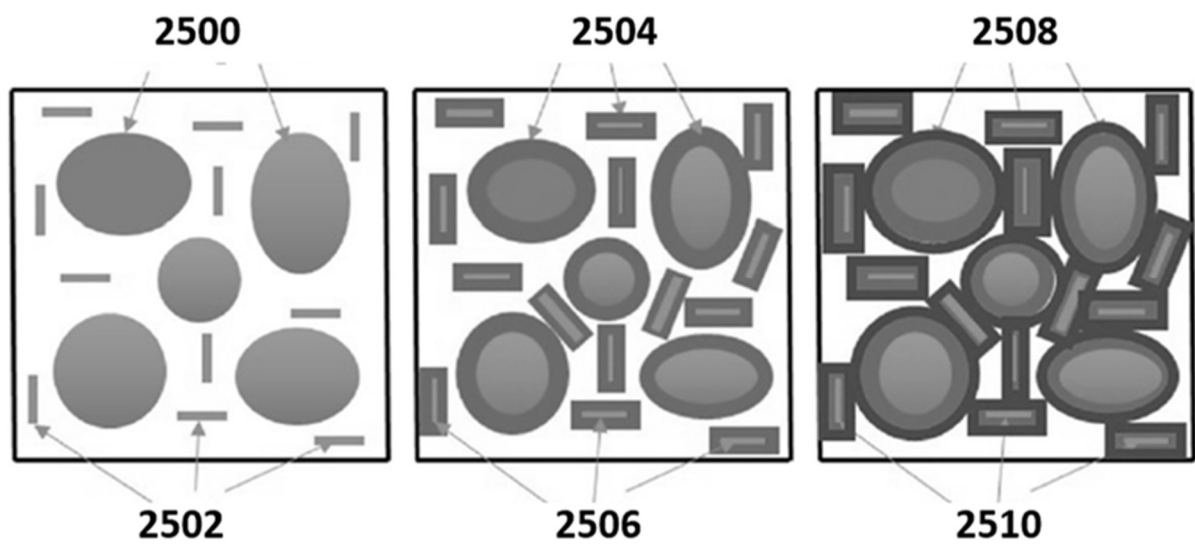


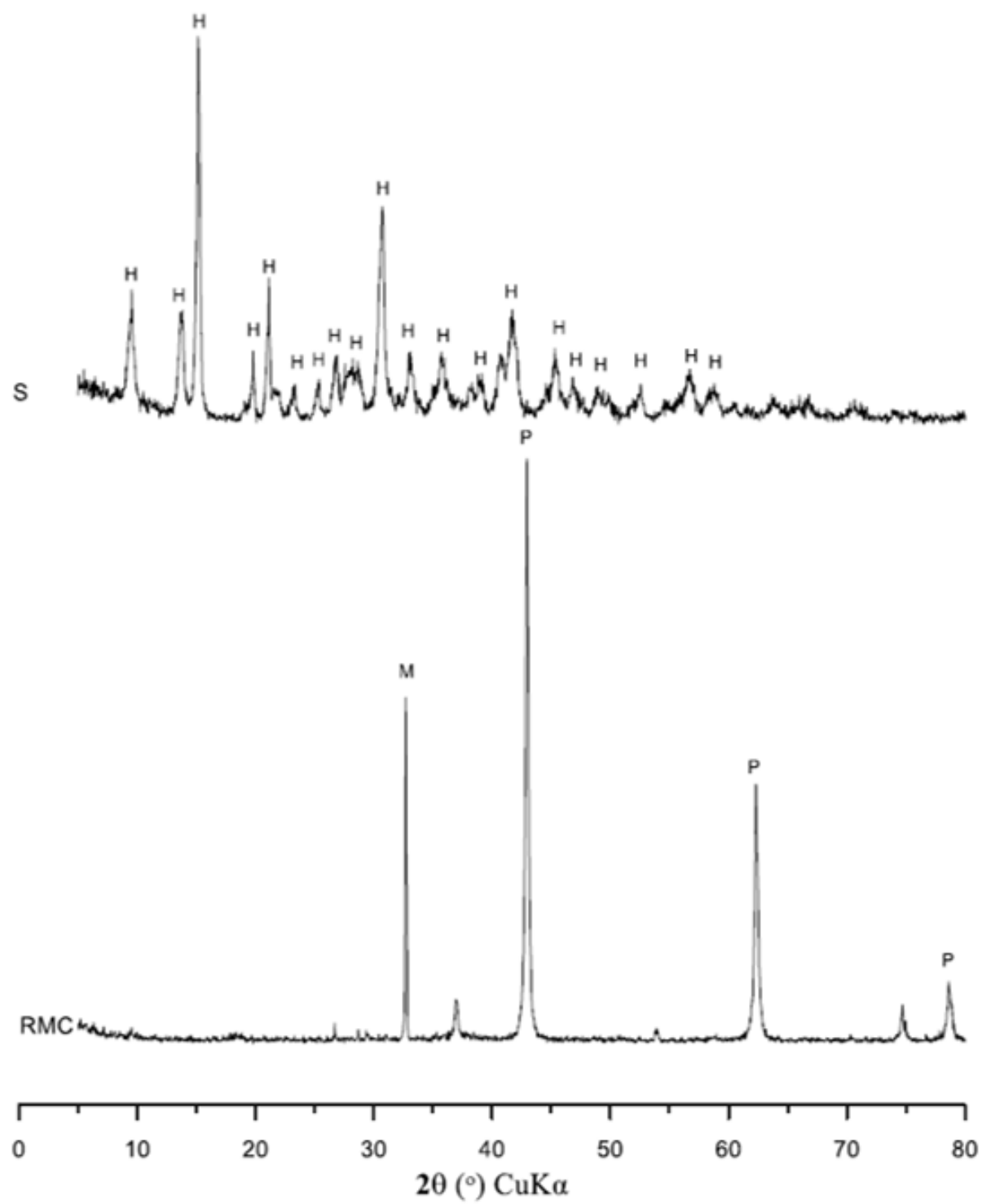
FIG. 26

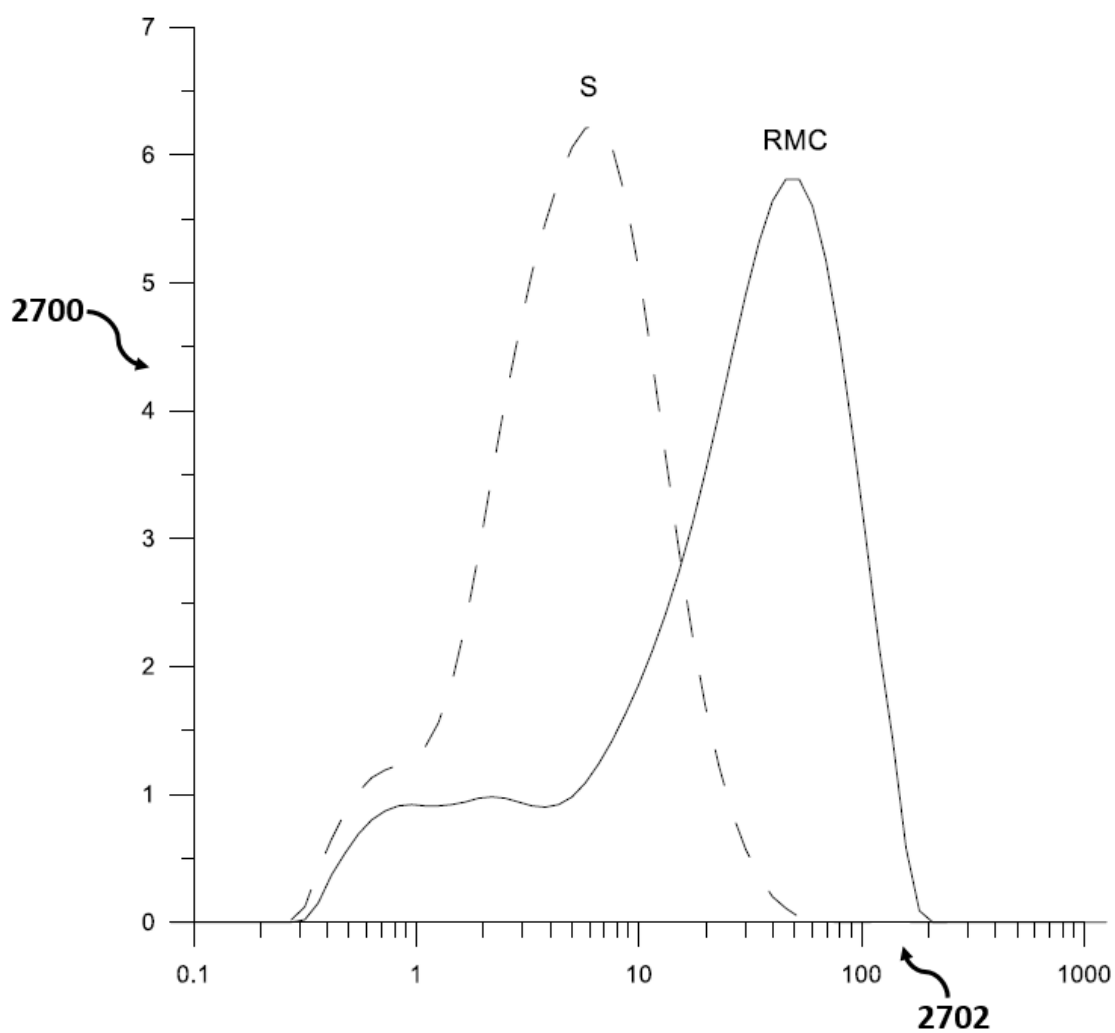
FIG. 27

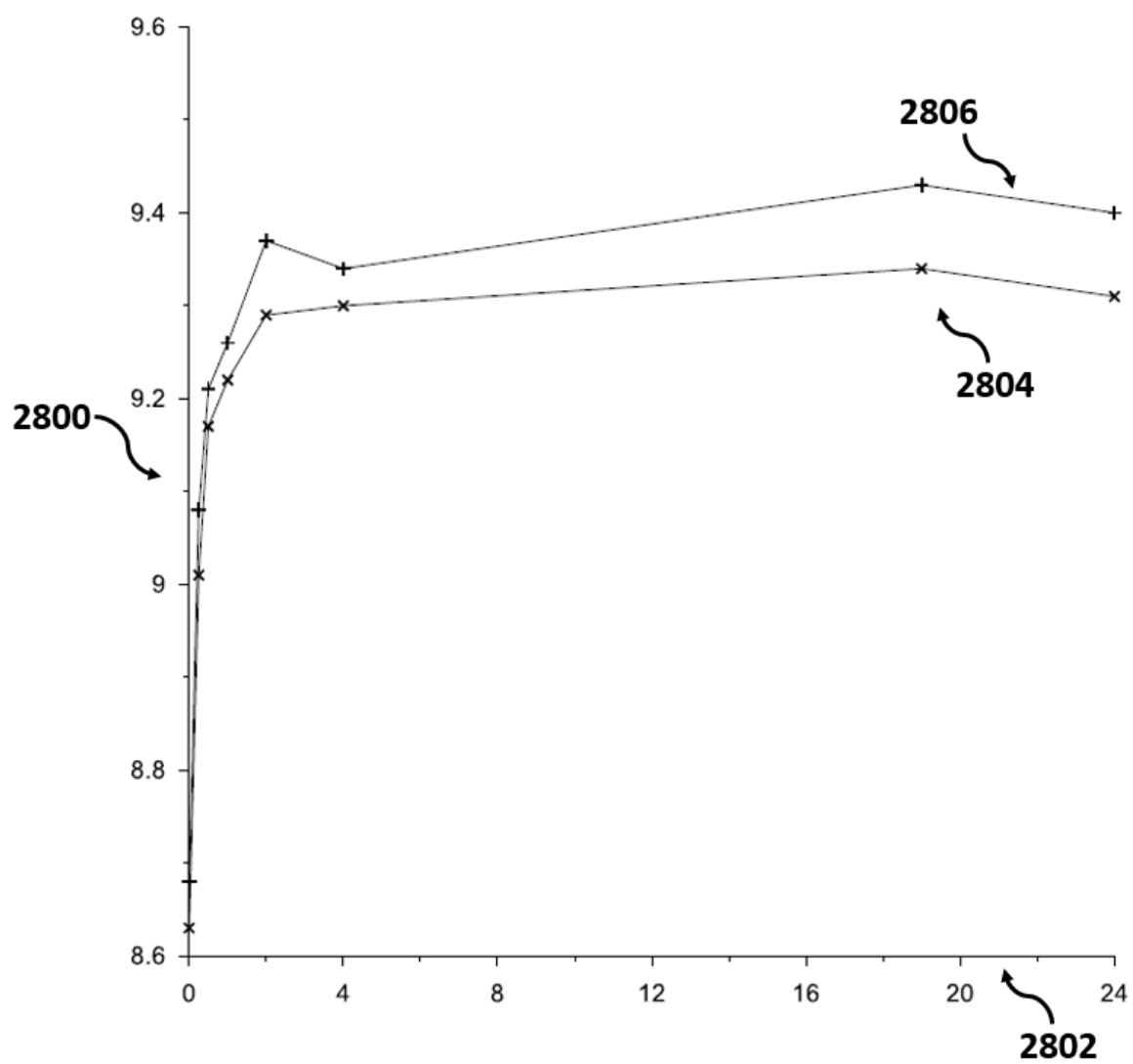
FIG. 28

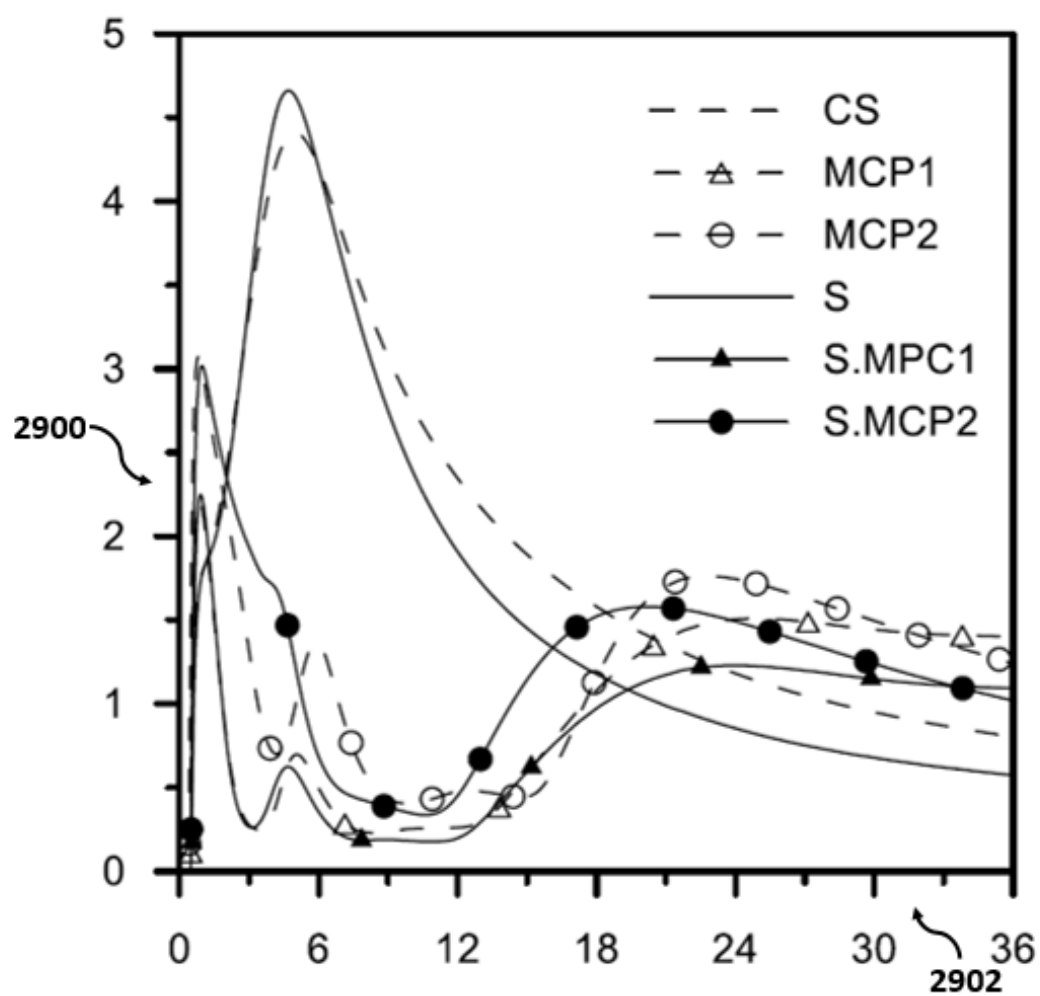
FIG. 29A

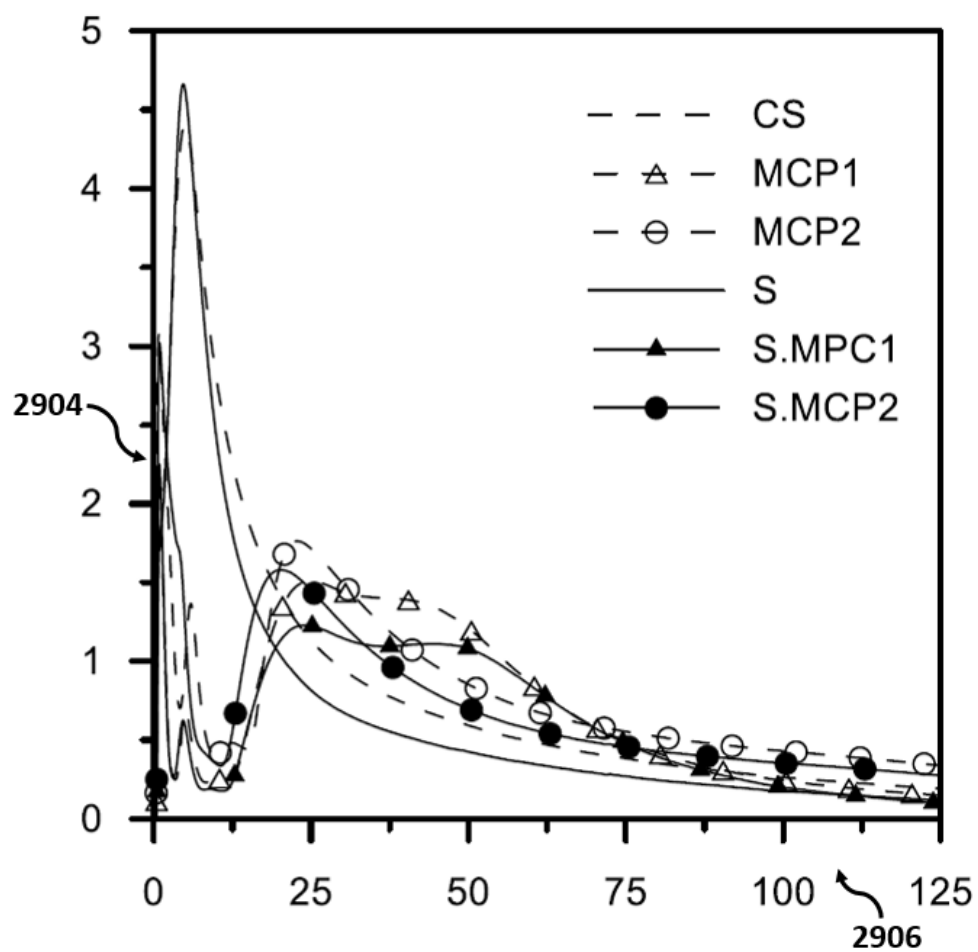
FIG. 29B

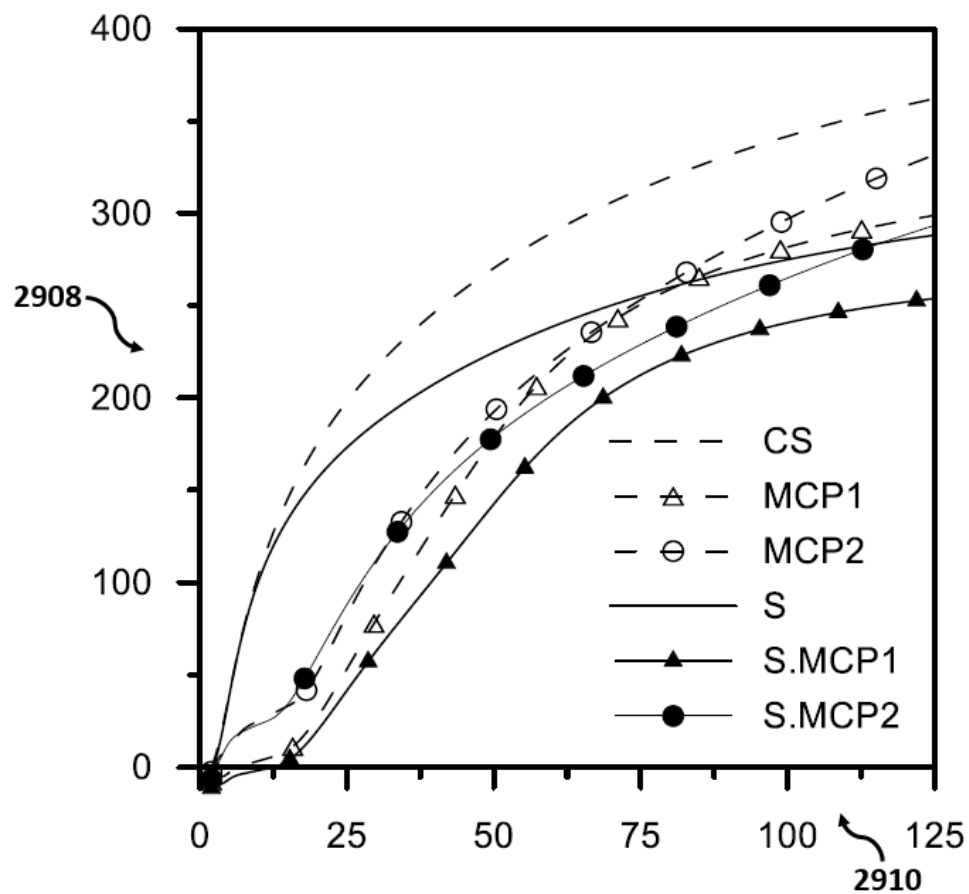
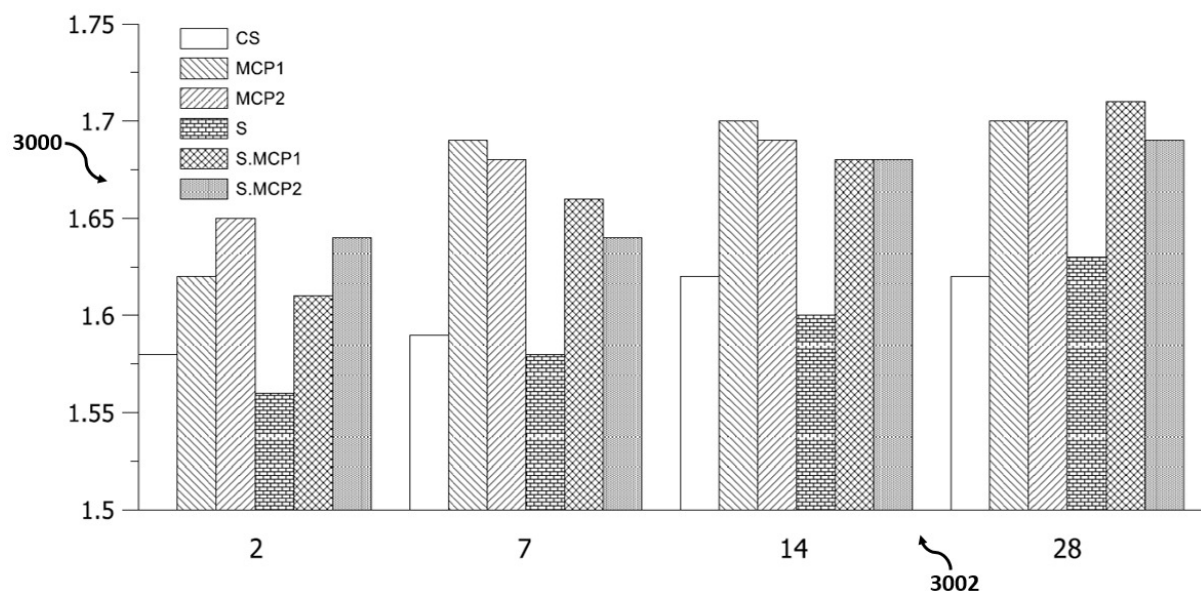
FIG. 29C**FIG. 30**

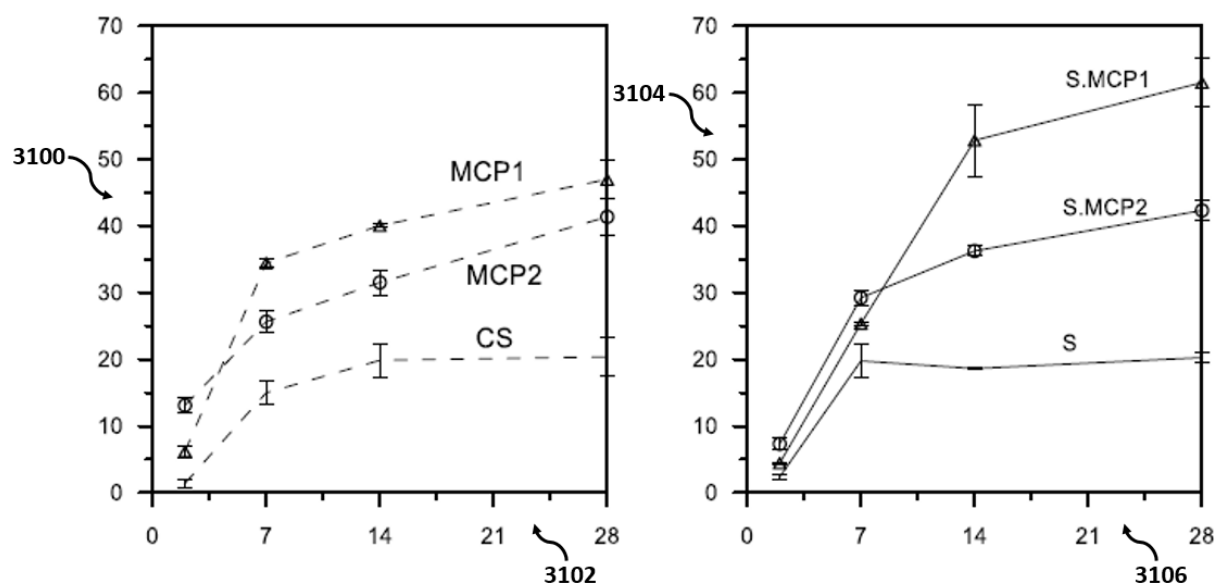
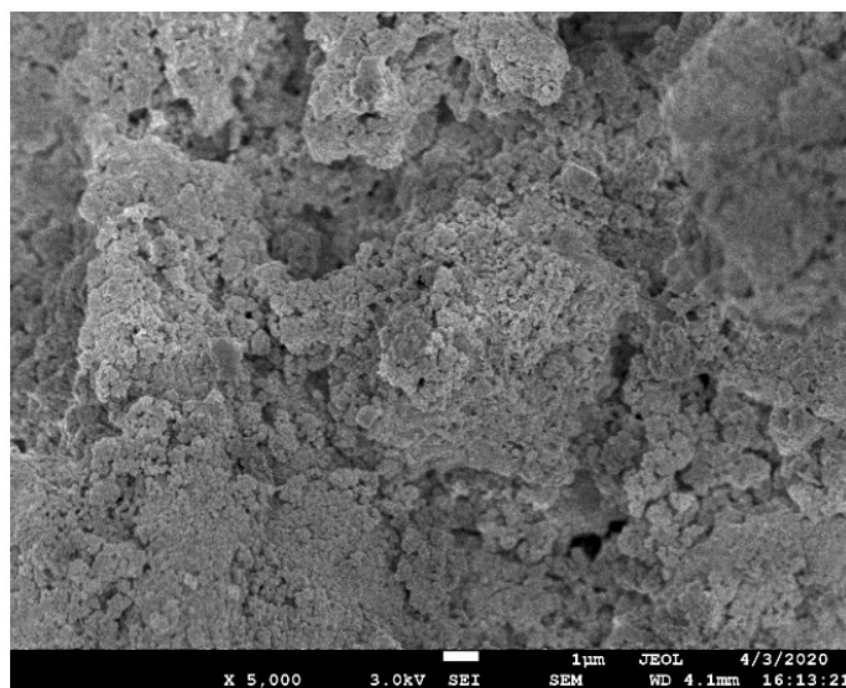
FIG. 31**FIG. 32A**

FIG. 32B

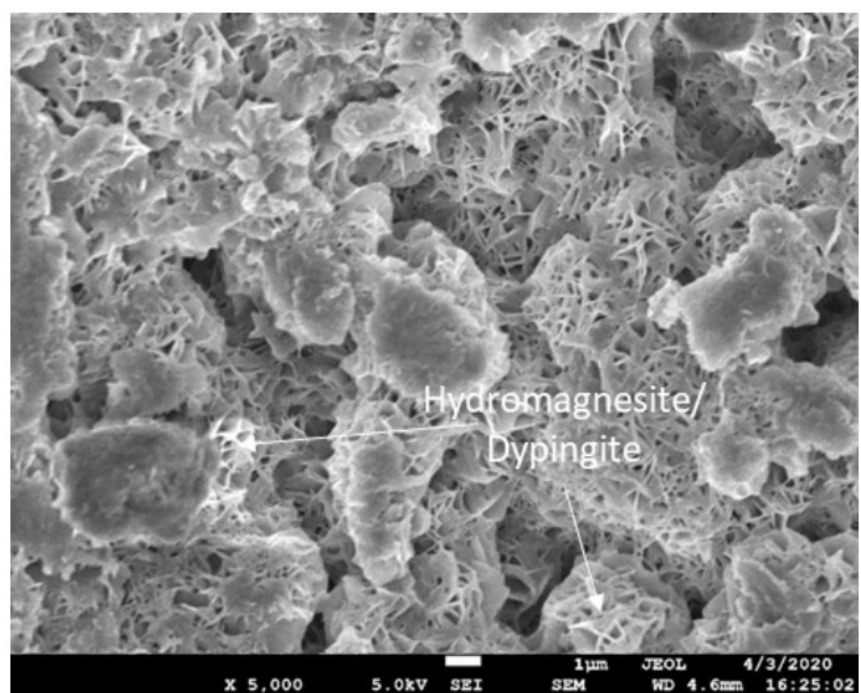


FIG. 32C

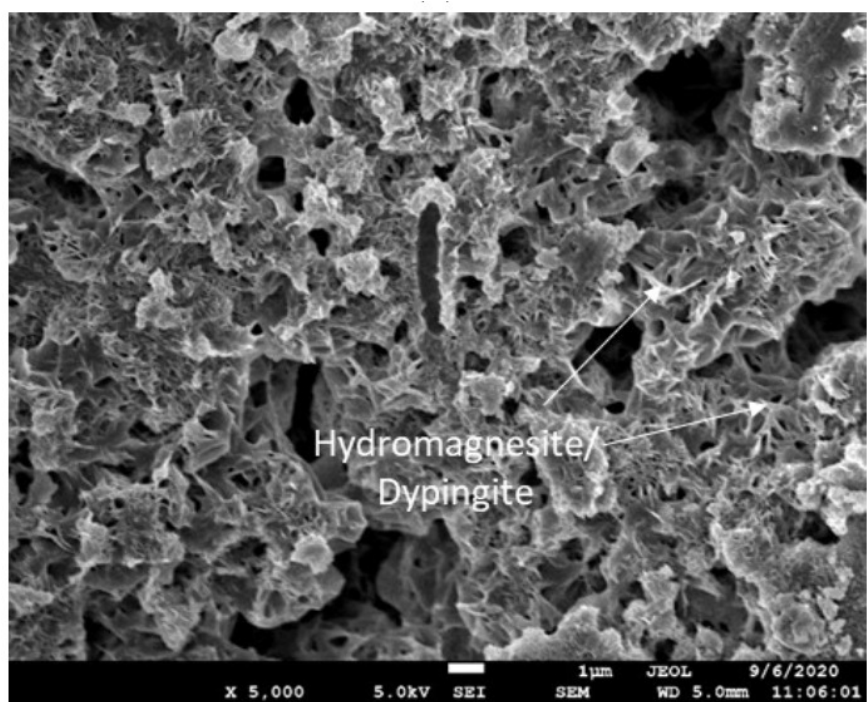


FIG. 32D

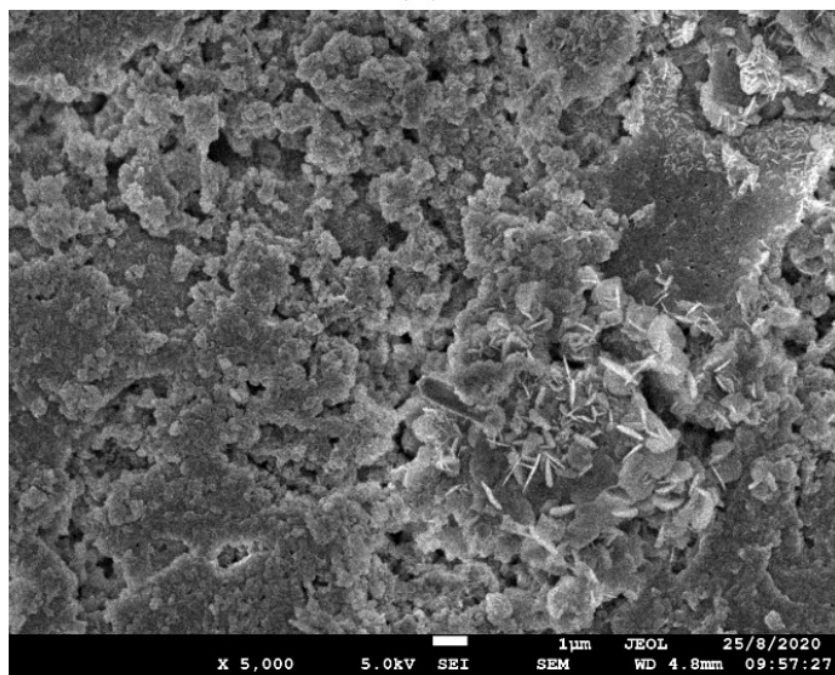


FIG. 32E

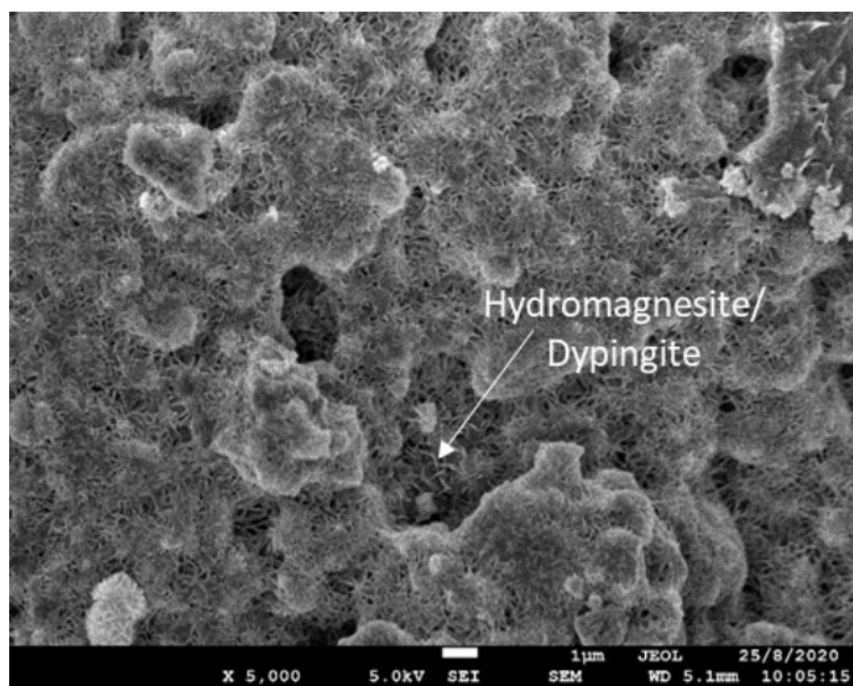


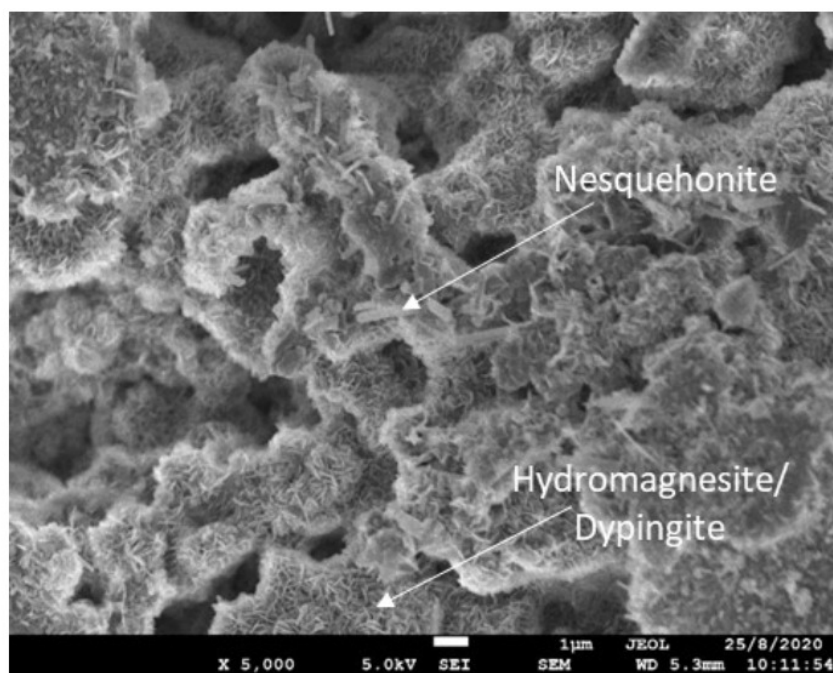
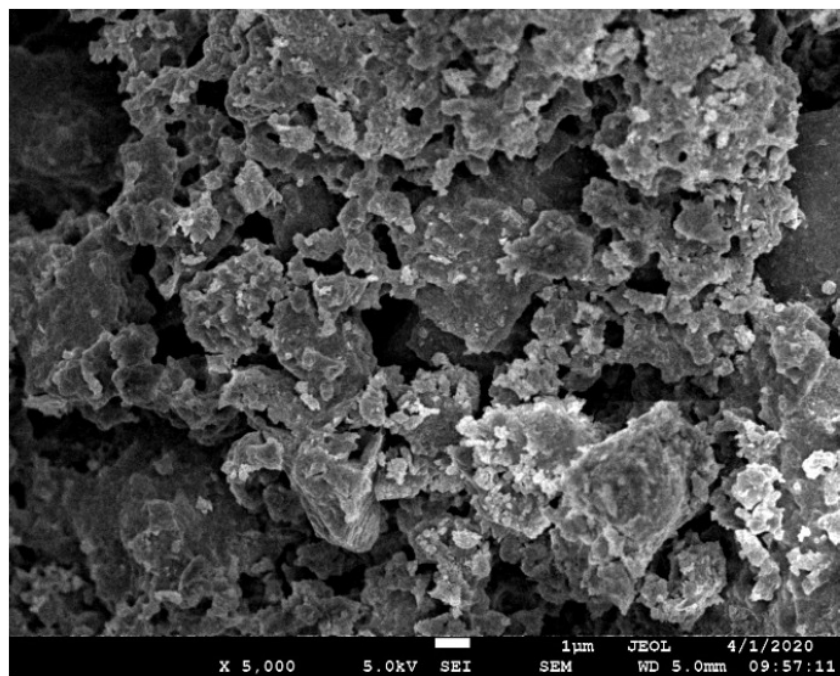
FIG. 32F**FIG. 33A**

FIG. 33B

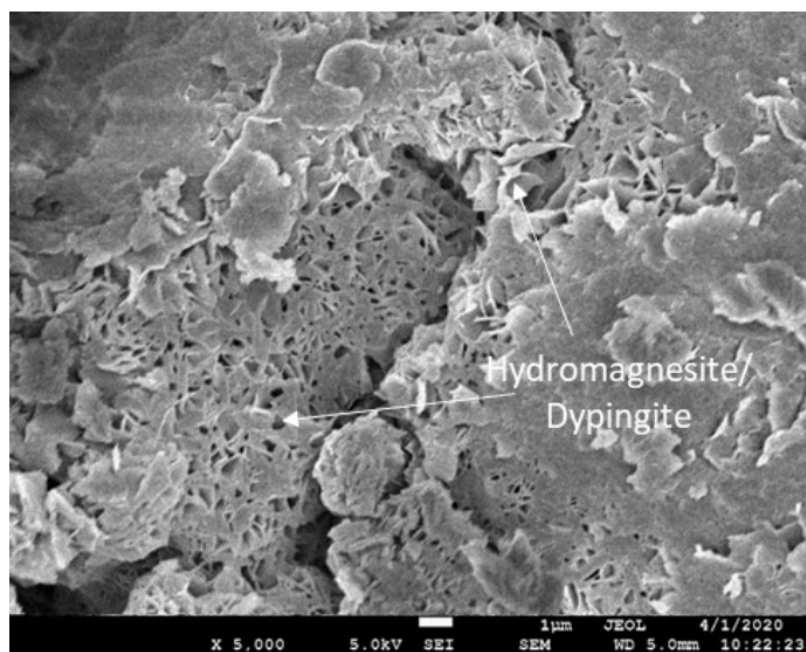


FIG. 33C

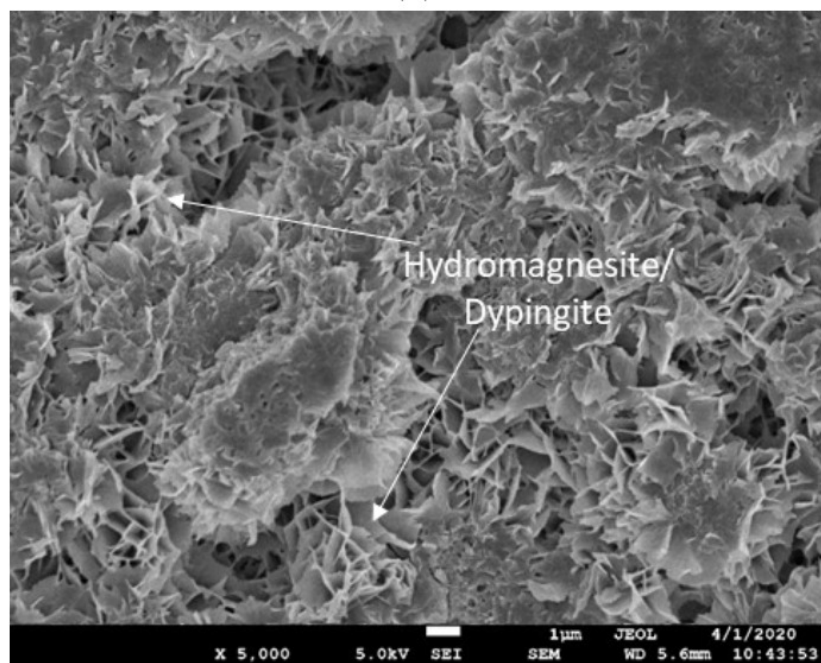


FIG. 33D

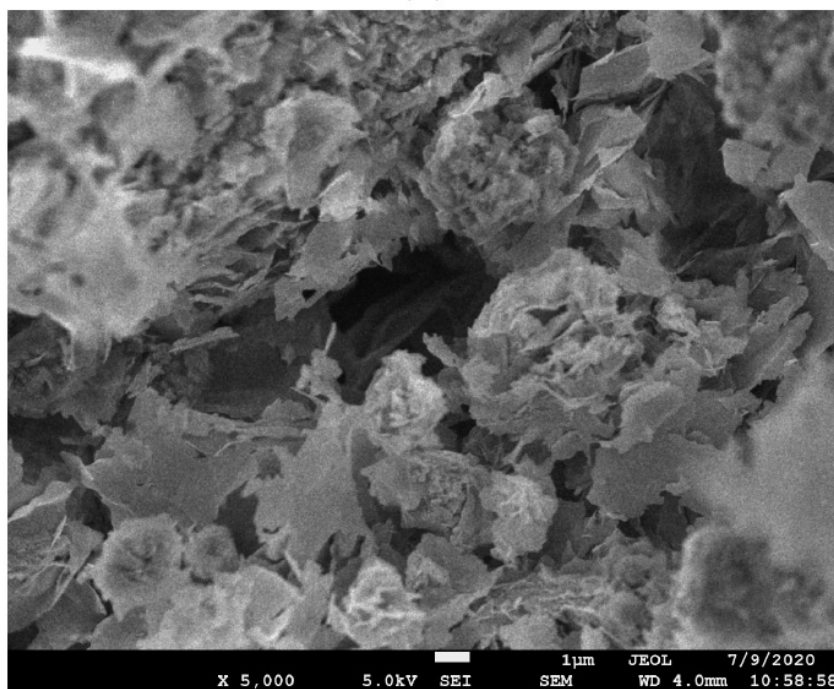


FIG. 33E

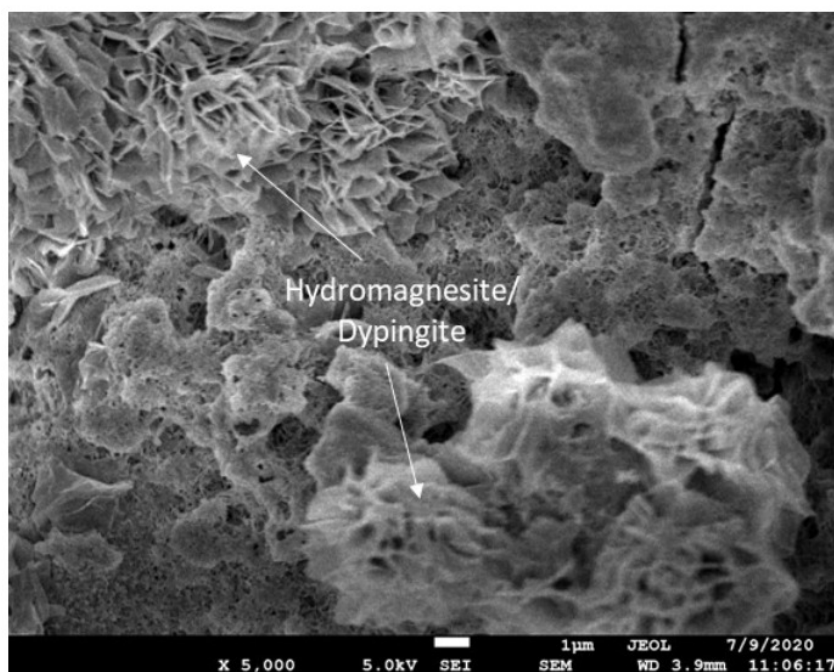


FIG. 33F

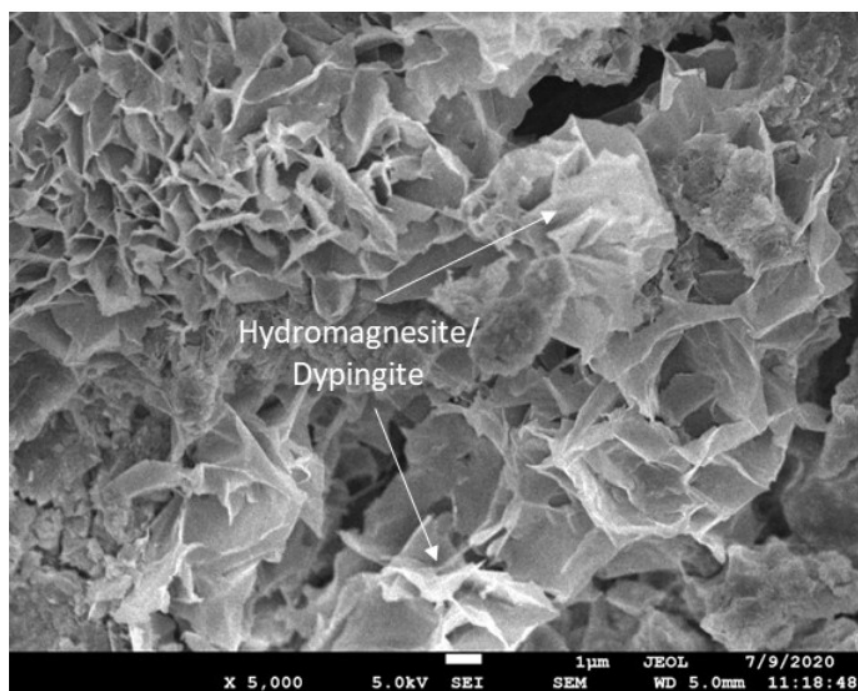


FIG. 34A

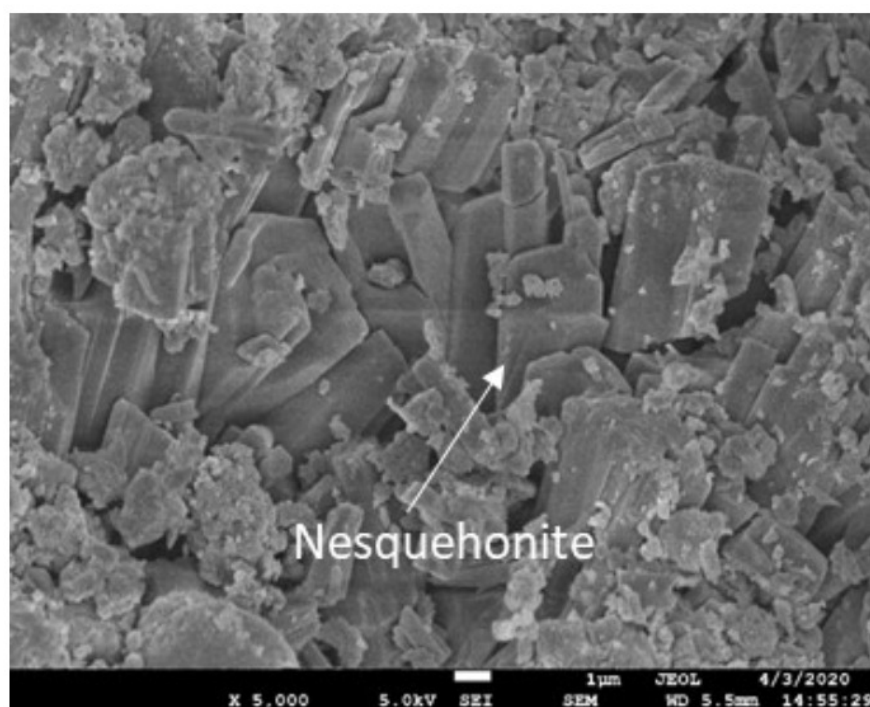


FIG. 34B

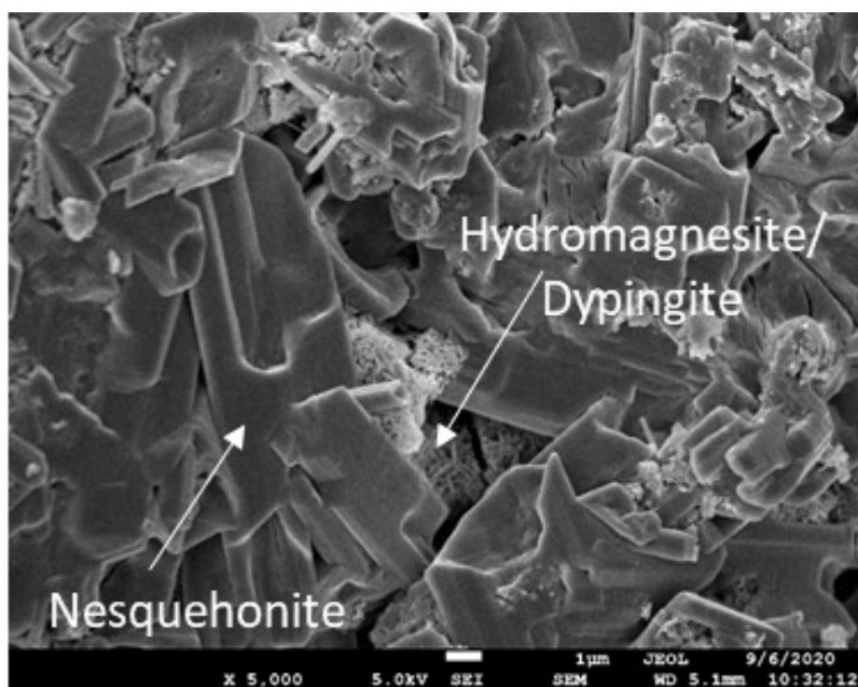


FIG. 34C

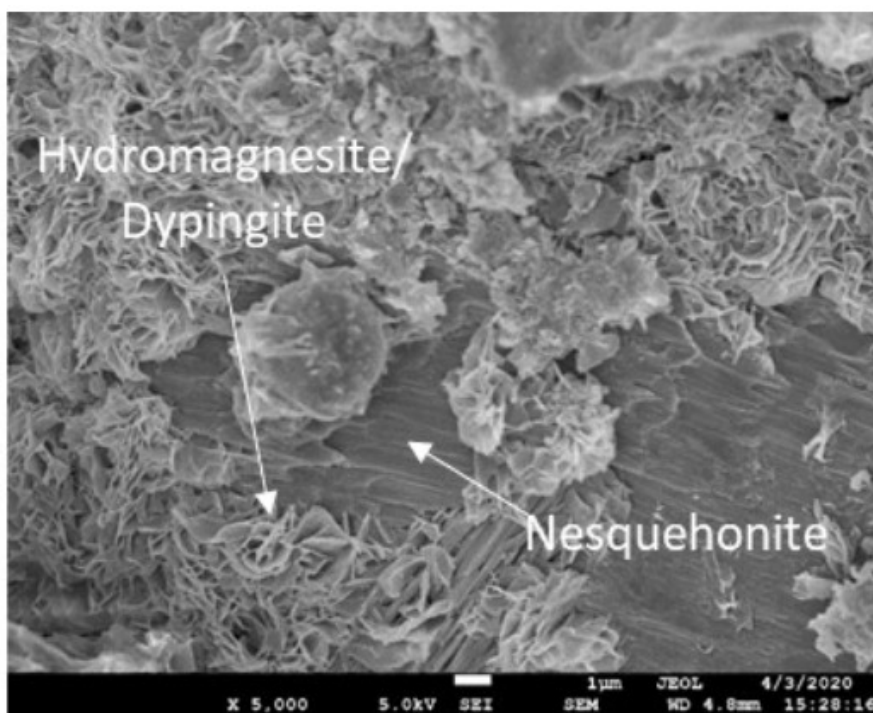


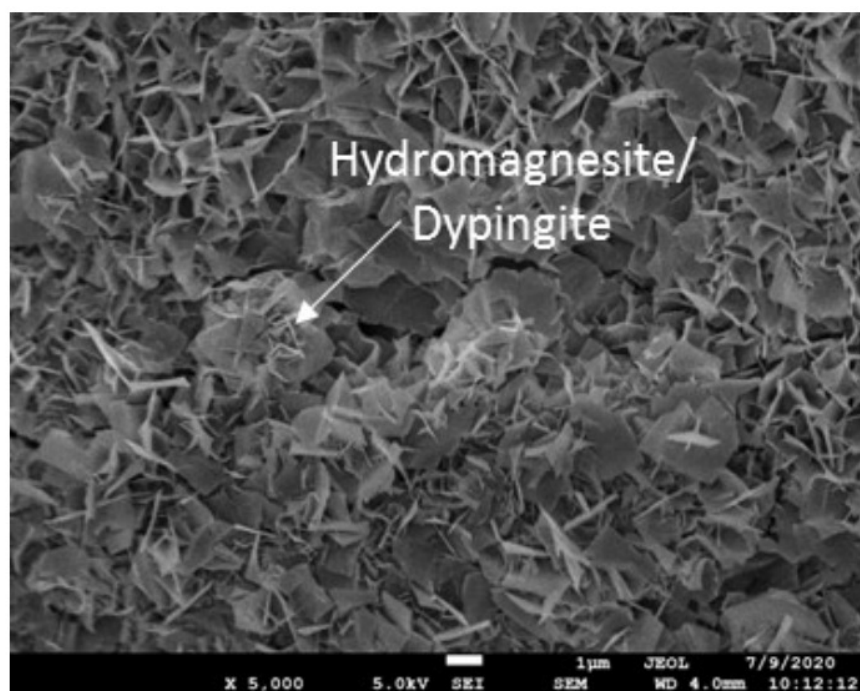
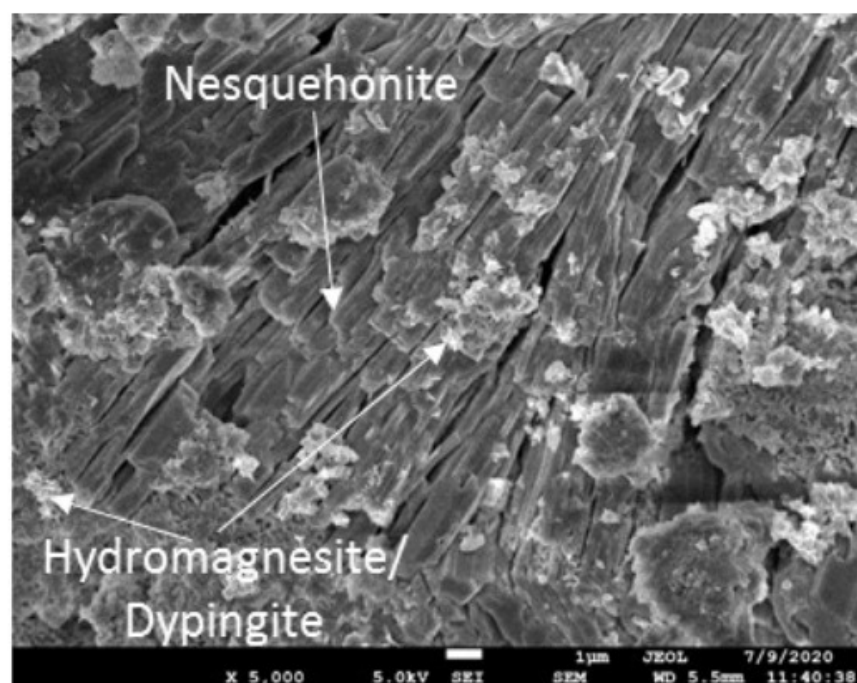
FIG. 34D**FIG. 34E**

FIG. 34F

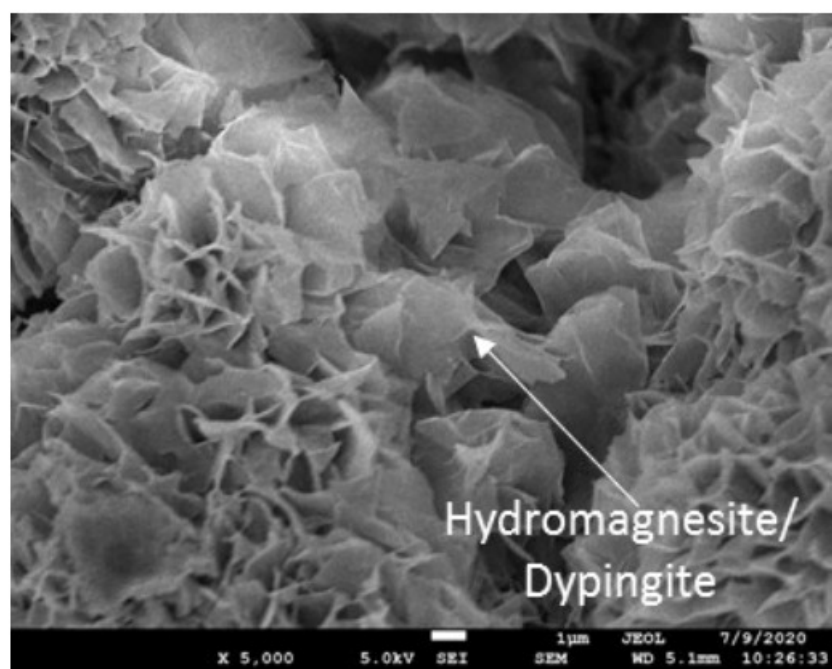


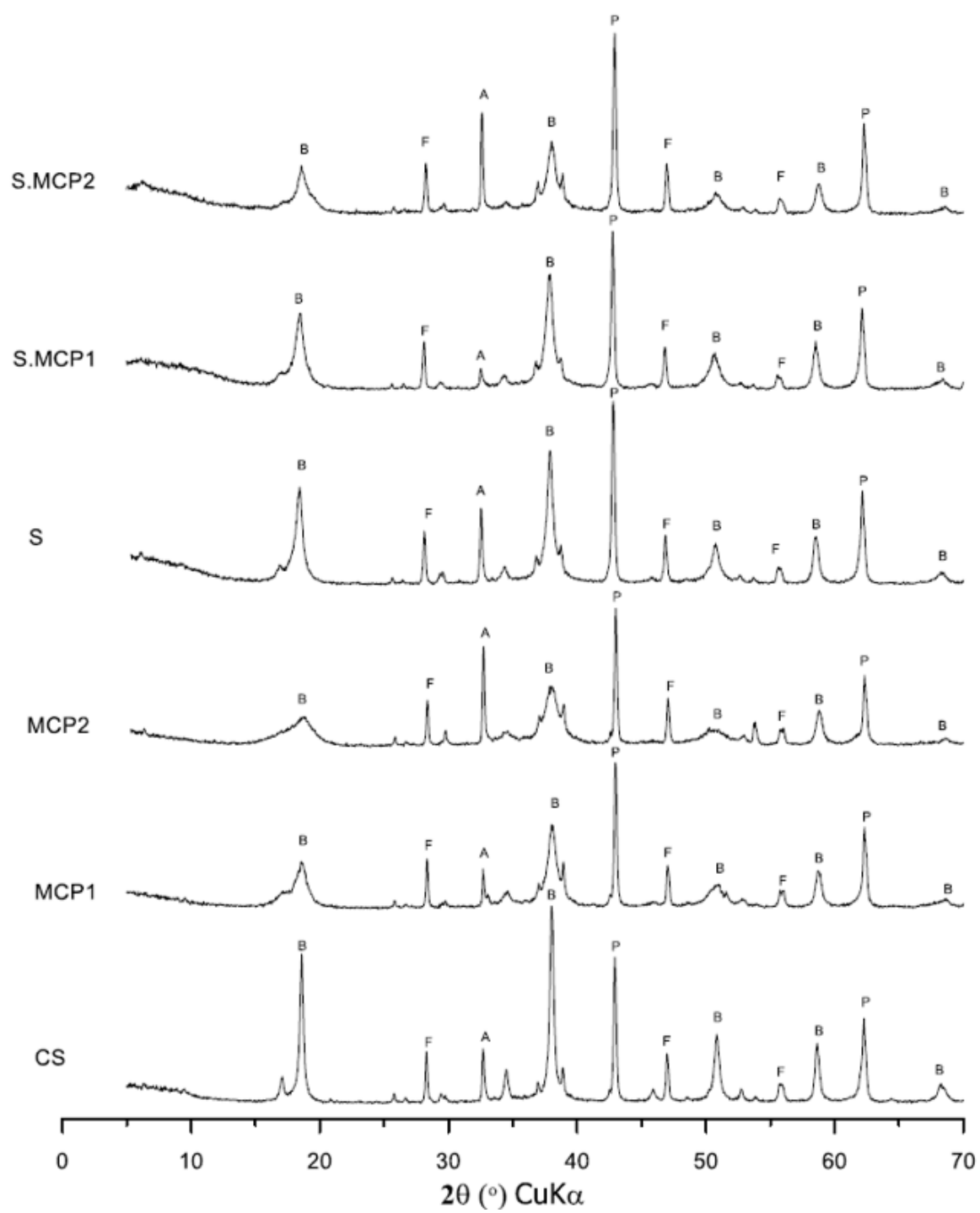
FIG. 35

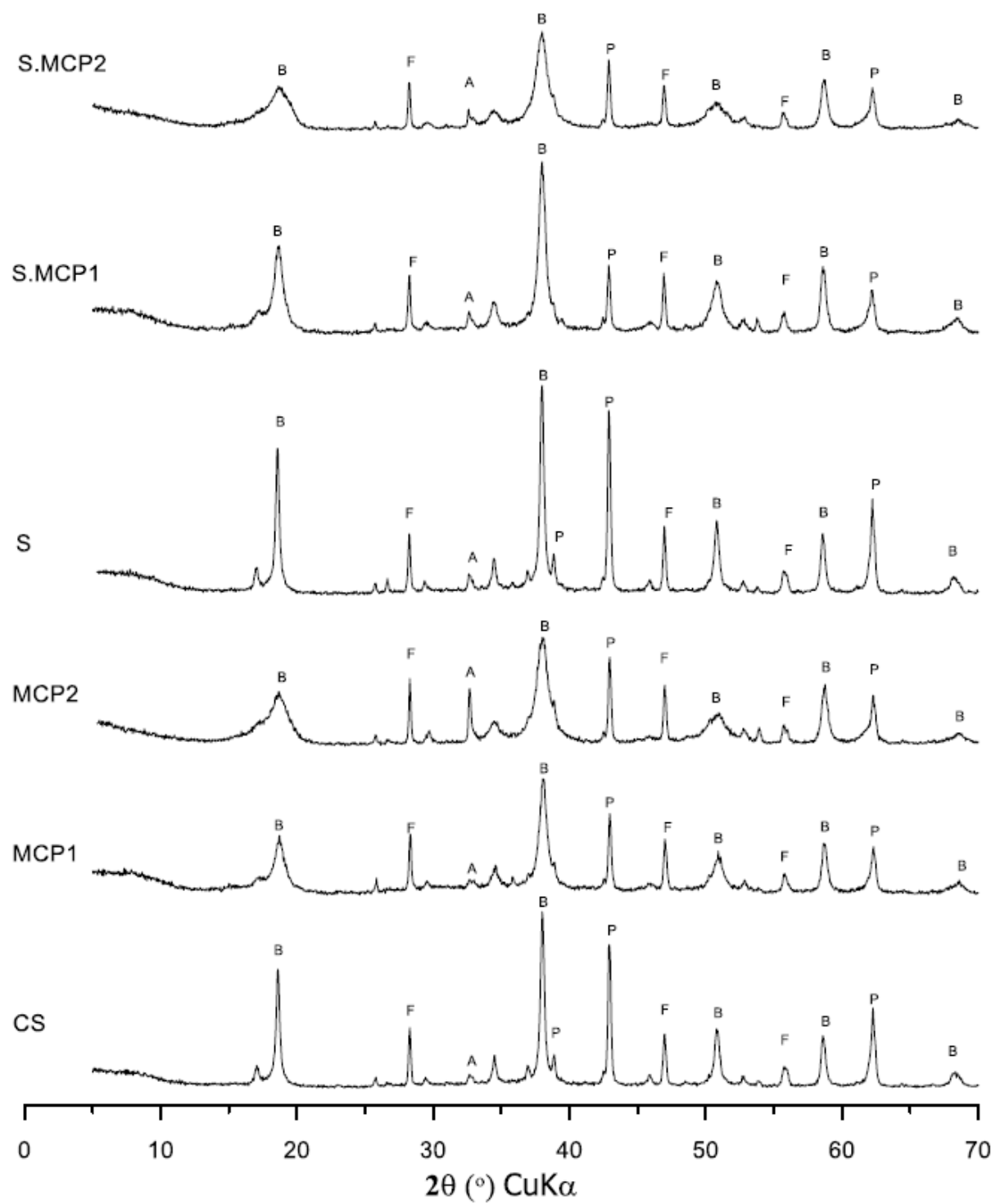
FIG. 36

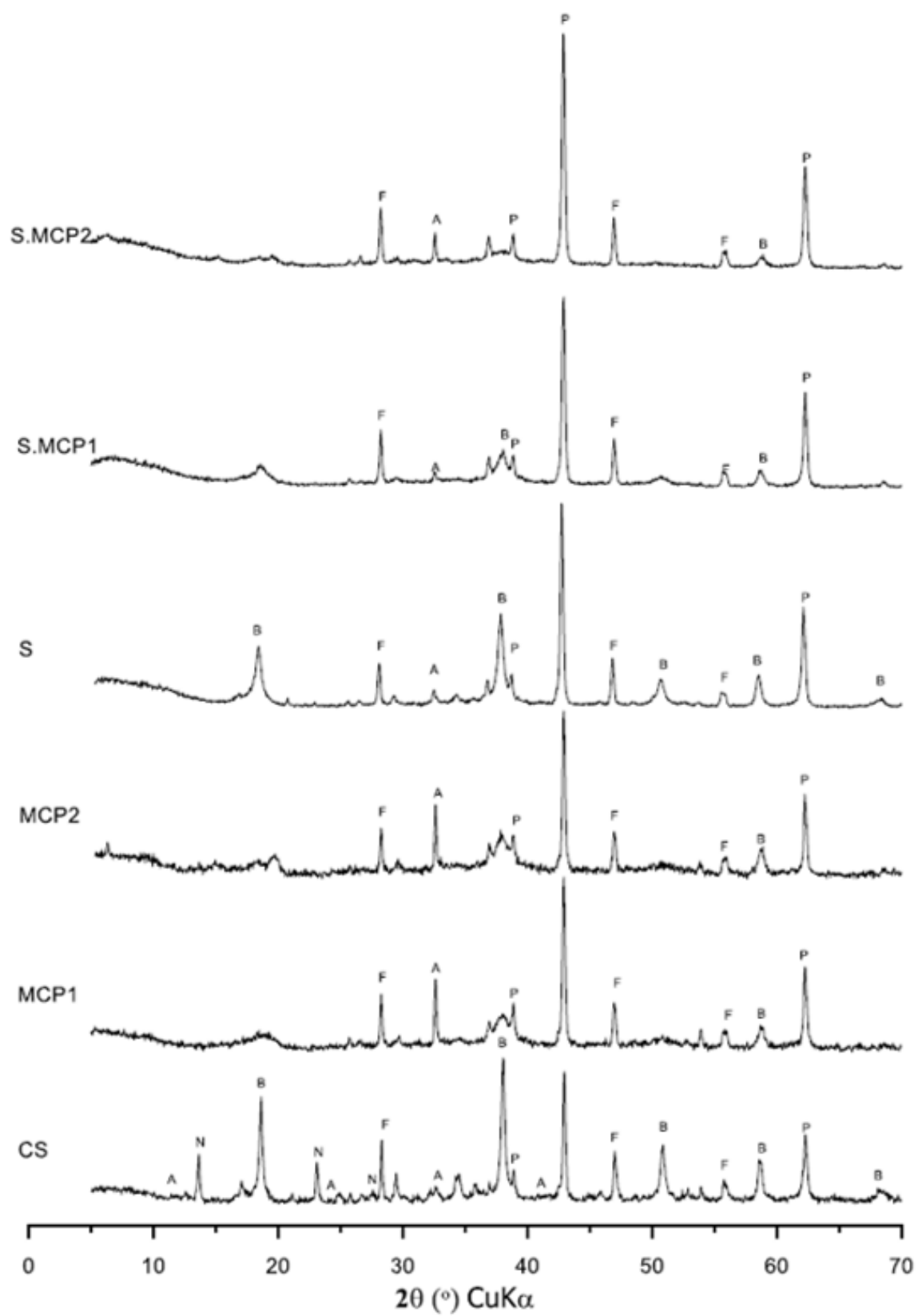
FIG. 37

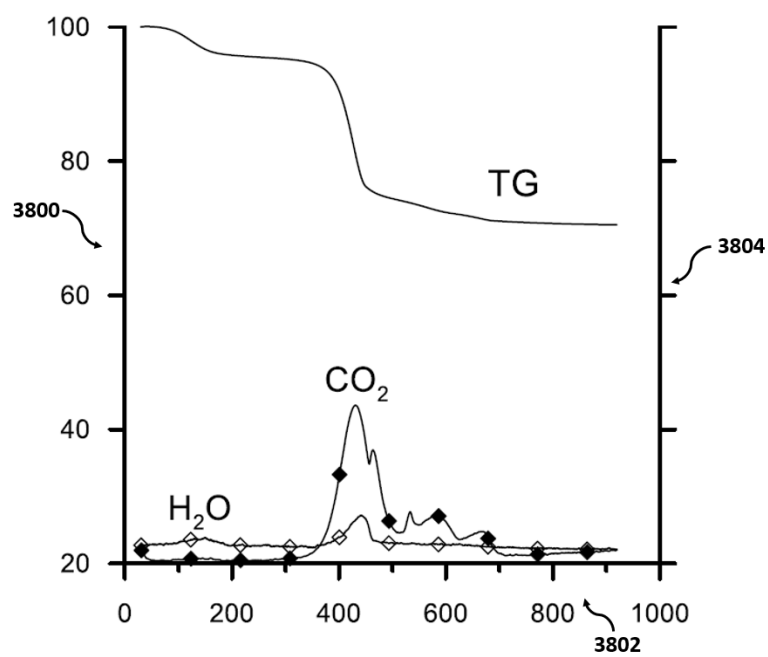
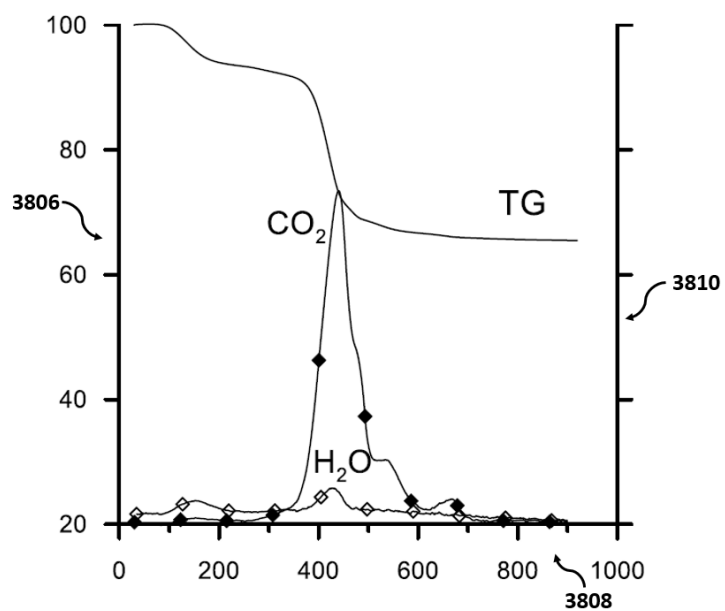
FIG. 38A**FIG. 38B**

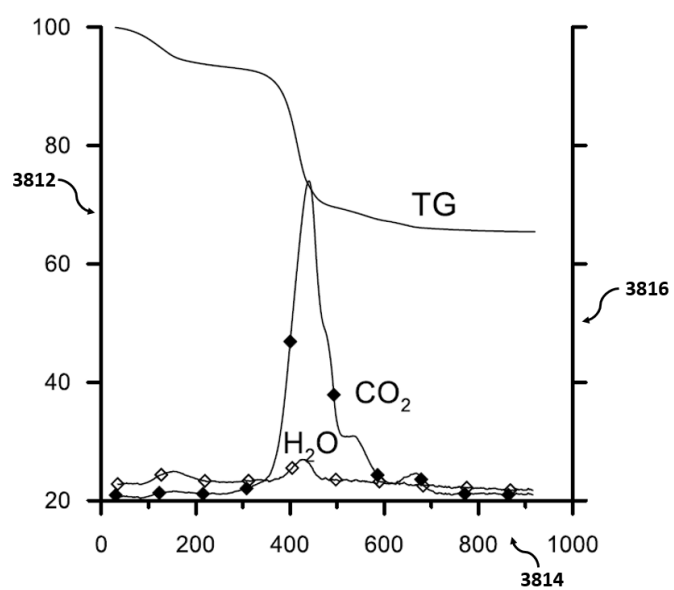
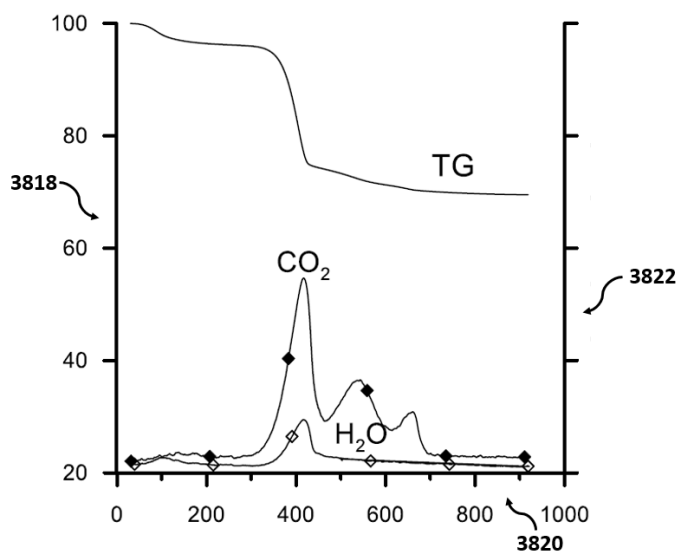
FIG. 38C**FIG. 38D**

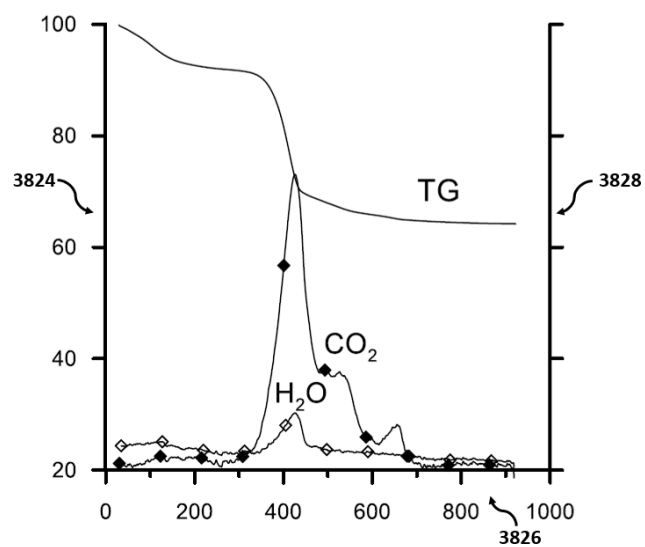
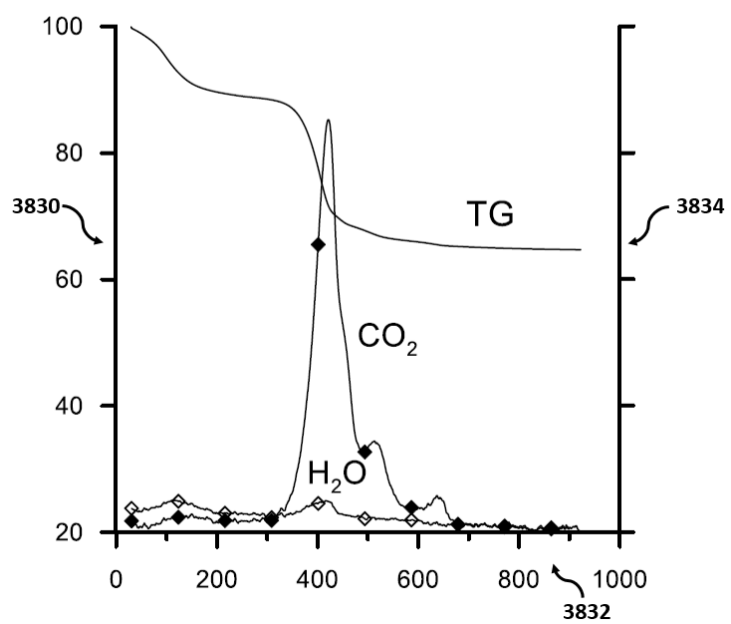
FIG. 38E**FIG. 38F**

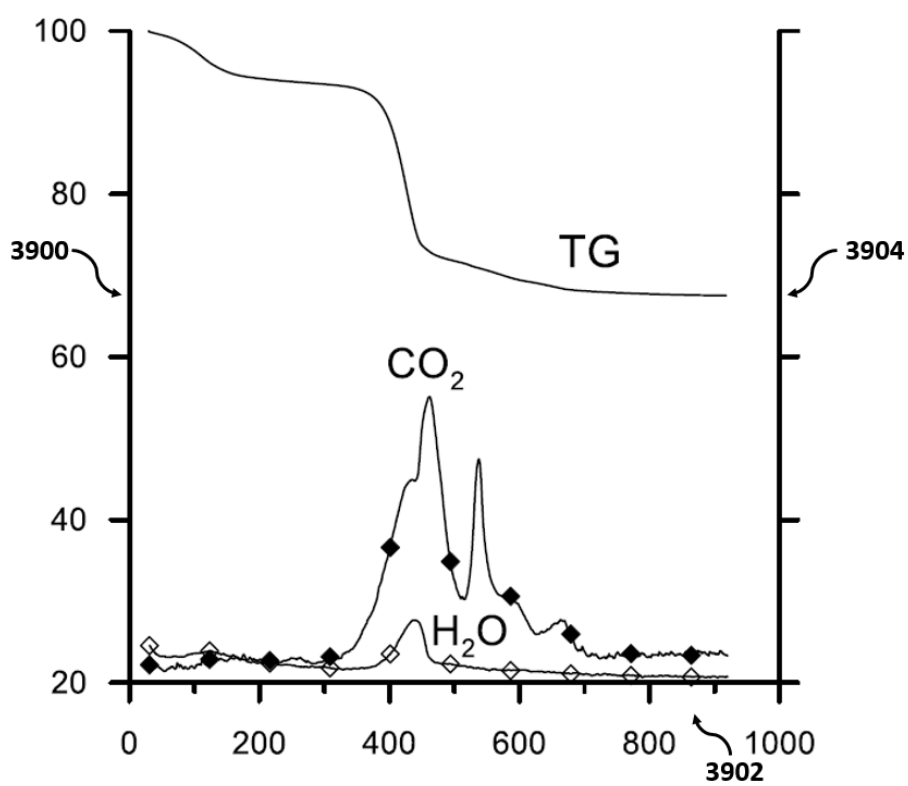
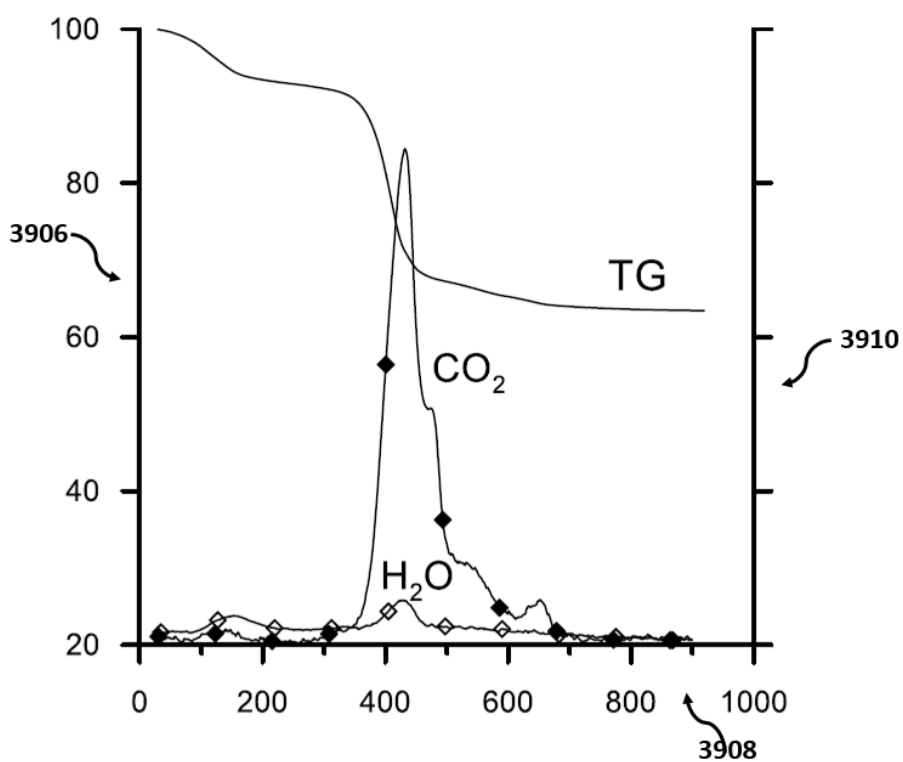
FIG. 39A**FIG. 39B**

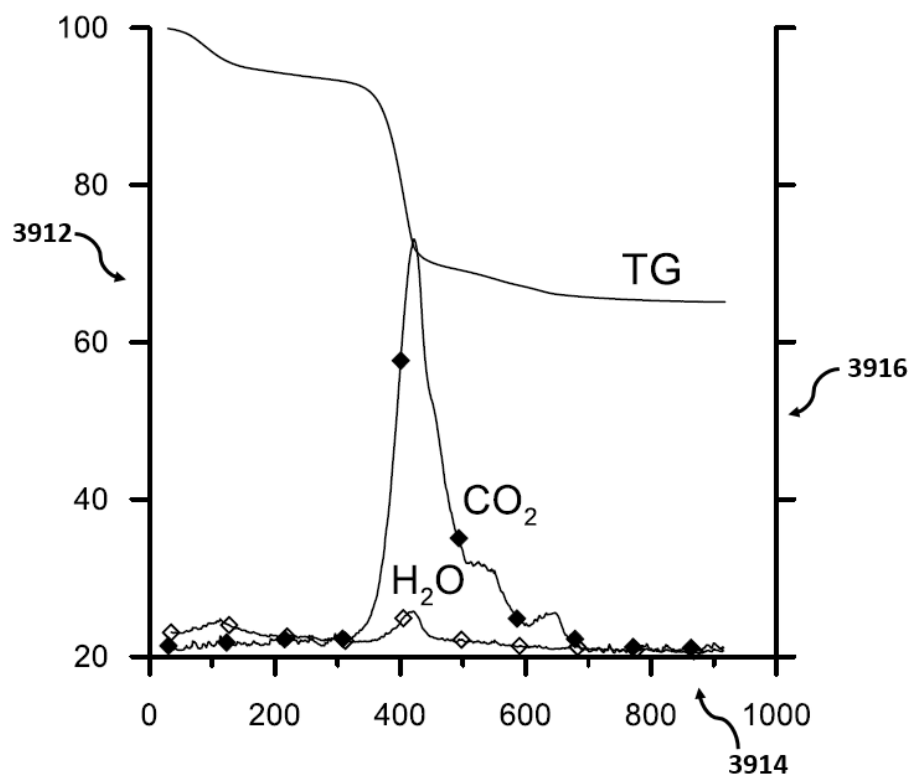
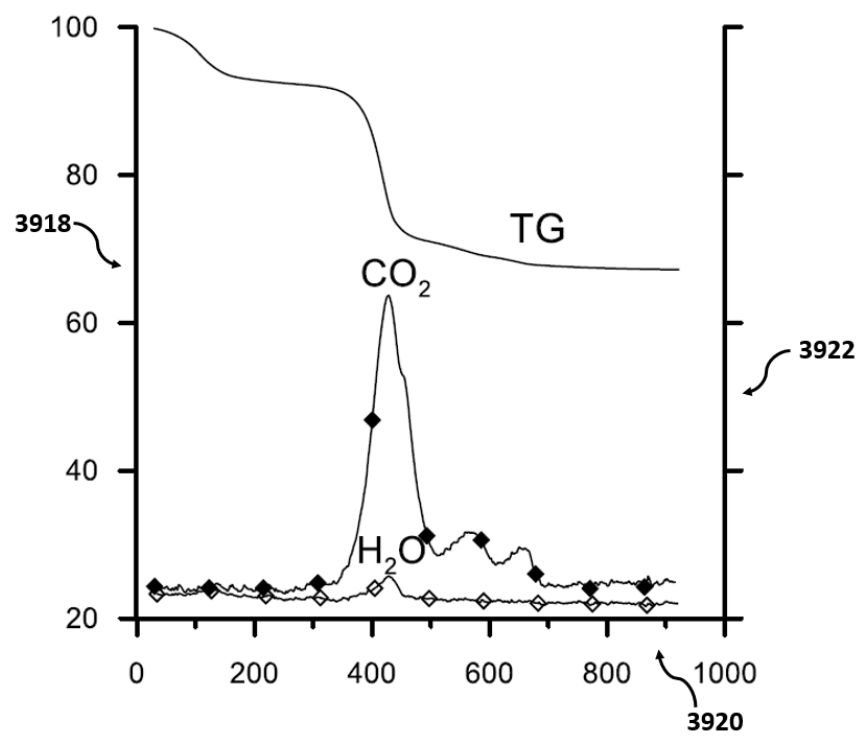
FIG. 39C**FIG. 39D**

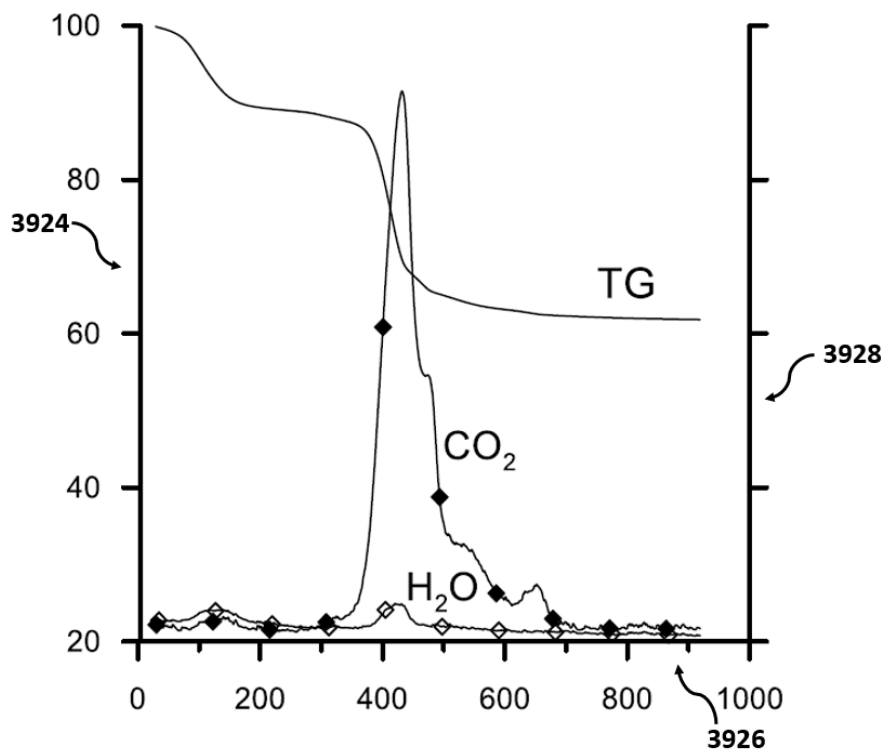
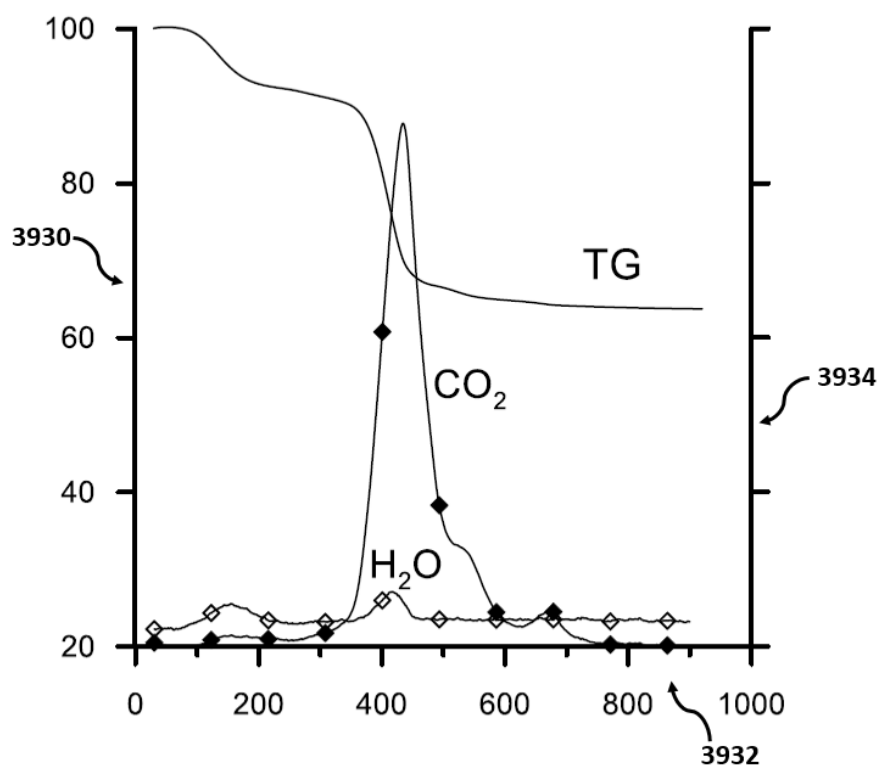
FIG. 39E**FIG. 39F**

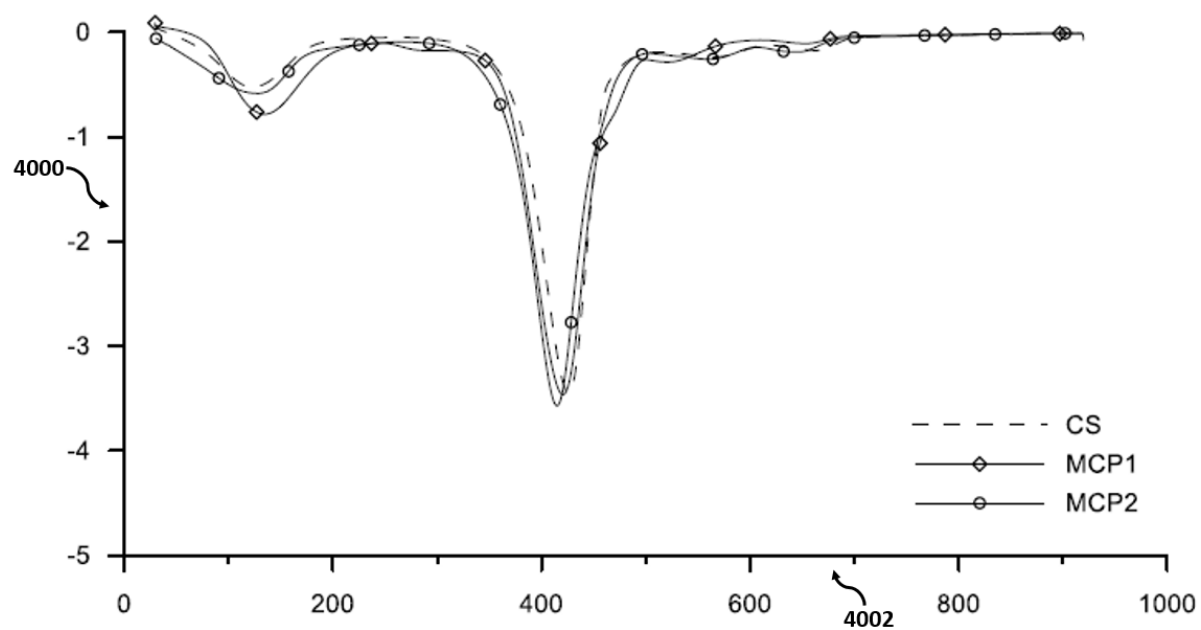
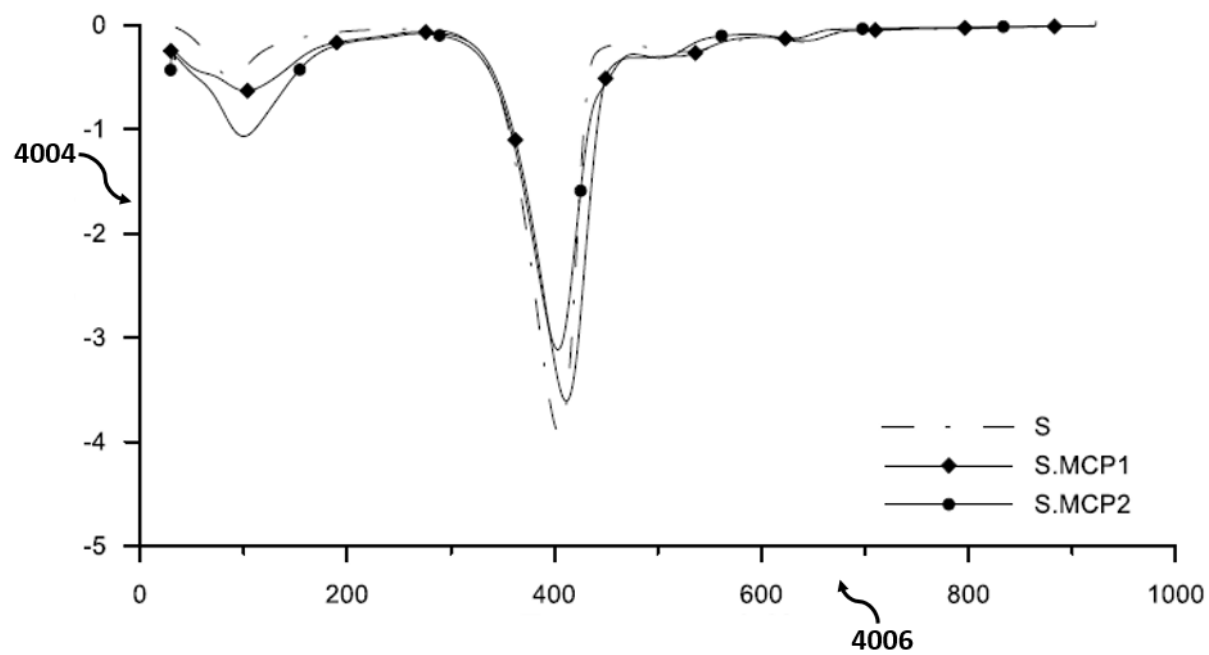
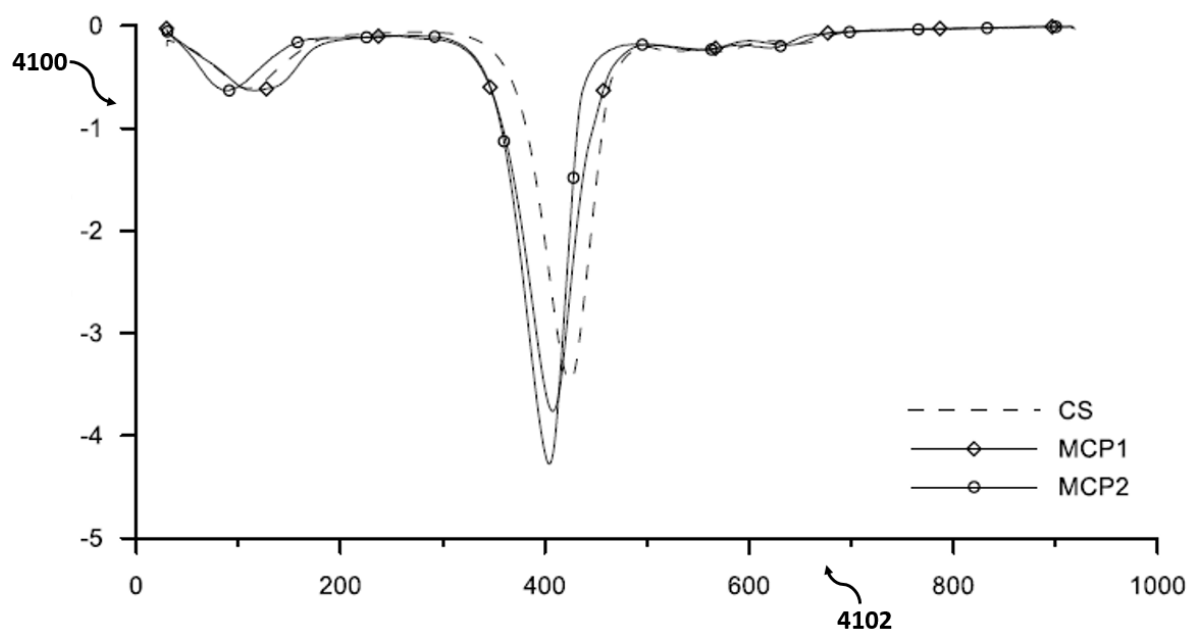
FIG. 40A**FIG. 40B**

FIG. 41A**FIG. 41B**