Supporting Information

Synthesis, characterization, and potential photocatalytic CO_2 reduction application of the $CaW_xMo_{1-x}O_4$ (x = 0 – 1) solid solution

Luis F. Garay-Rodríguez[a], Luz I. Ibarra-Rodríguez[b], Leticia M. Torres-Martínez[a,c*], I. Juárez-Ramírez[a]

Table S1. Summary of the structural results obtained from Rietveld Refinement

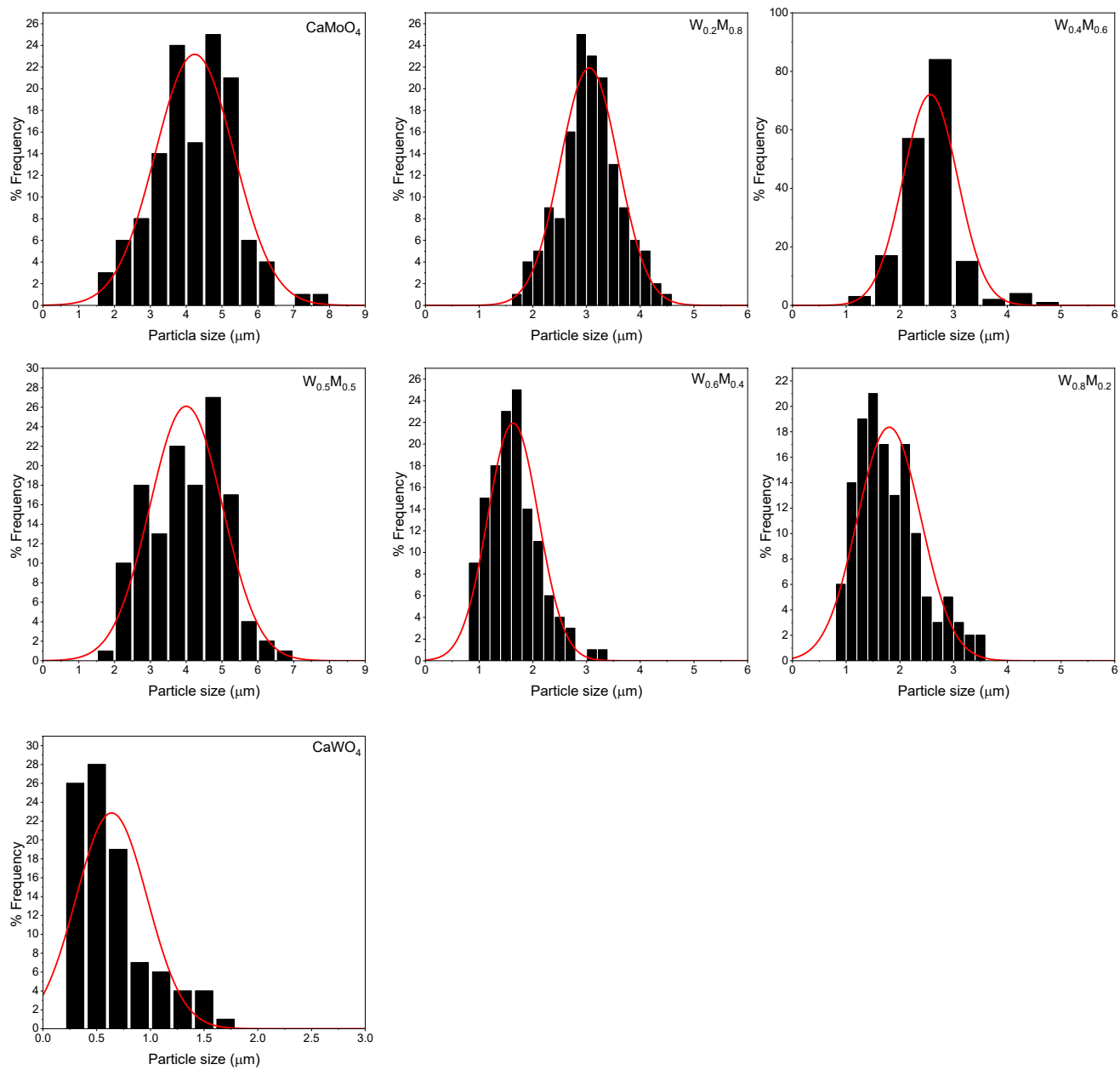| Sample	Atom	x	y	z	Occupancy	U iso	R_{wp}	R_{exp}	χ^2
$CaMoO_4$	Ca	0.0	0.2504	0.6254	1.0	0.5566	8.82	13.27	0.66
	Mo	0.0	0.2504	0.1248	1.0	0.8566			
	O	0.1537	0.0	0.2080	1.0	0.6496			
$W_{0.2}M_{0.8}$	Ca	0.0	0.2495	0.6254	1.0	0.1592	6.76	5.41	1.24
	Mo	0.0	0.2503	0.1254	0.8004	0.1593			
	W	0.0	0.2503	0.1254	1.9995	0.1593			
	O	0.1548	0.0	0.2112	1.0	0.1593			
$W_{0.4}M_{0.6}$	Ca	0.0	0.2504	0.6254	1.0	0.2611	7.56	5.71	1.32
	Mo	0.0	0.2504	0.1254	0.599	0.3982			
	W	0.0	0.2504	0.1254	0.400	0.3982			
	O	0.1521	0.0101	0.2115	1.0	0.3742			
$W_{0.5}M_{0.5}$	Ca	0.0	0.2495	0.6248	1.0	0.2322	7.13	5.85	1.21
	Mo	0.0	0.2504	0.1249	0.499	0.2322			
	W	0.0	0.2504	0.1249	0.500	0.2322			
	O	0.1546	0.0082	0.2105	1.0	0.2322			
$W_{0.6}M_{0.4}$	Ca	0.0	0.2495	0.6252	1.0	0.4022	9.12	5.25	1.73
	Mo	0.0	0.2501	0.1254	0.3996	0.4154			
	W	0.0	0.2501	0.1254	0.6004	0.4154			
	O	0.1553	0.0110	0.2125	1.0	0.4208			
$W_{0.8}M_{0.2}$	Ca	0.0	0.2495	0.6254	1.0	2.3087	10.04	15.32	0.65
	Mo	0.0	0.2504	0.1254	0.1879	0.4755			
	W	0.0	0.2504	0.1254	0.8120	0.4755			
	O	0.1579	0.0037	0.2099	1.0	2.2860			
$CaWO_4$	Ca	0.0	0.2499	0.6249	1.0	0.2064	6.88	10.81	0.63
	W	0.0	0.2500	0.1250	1.0	0.2644			
	O	0.1624	0.0224	0.2126	1.0	0.2645			

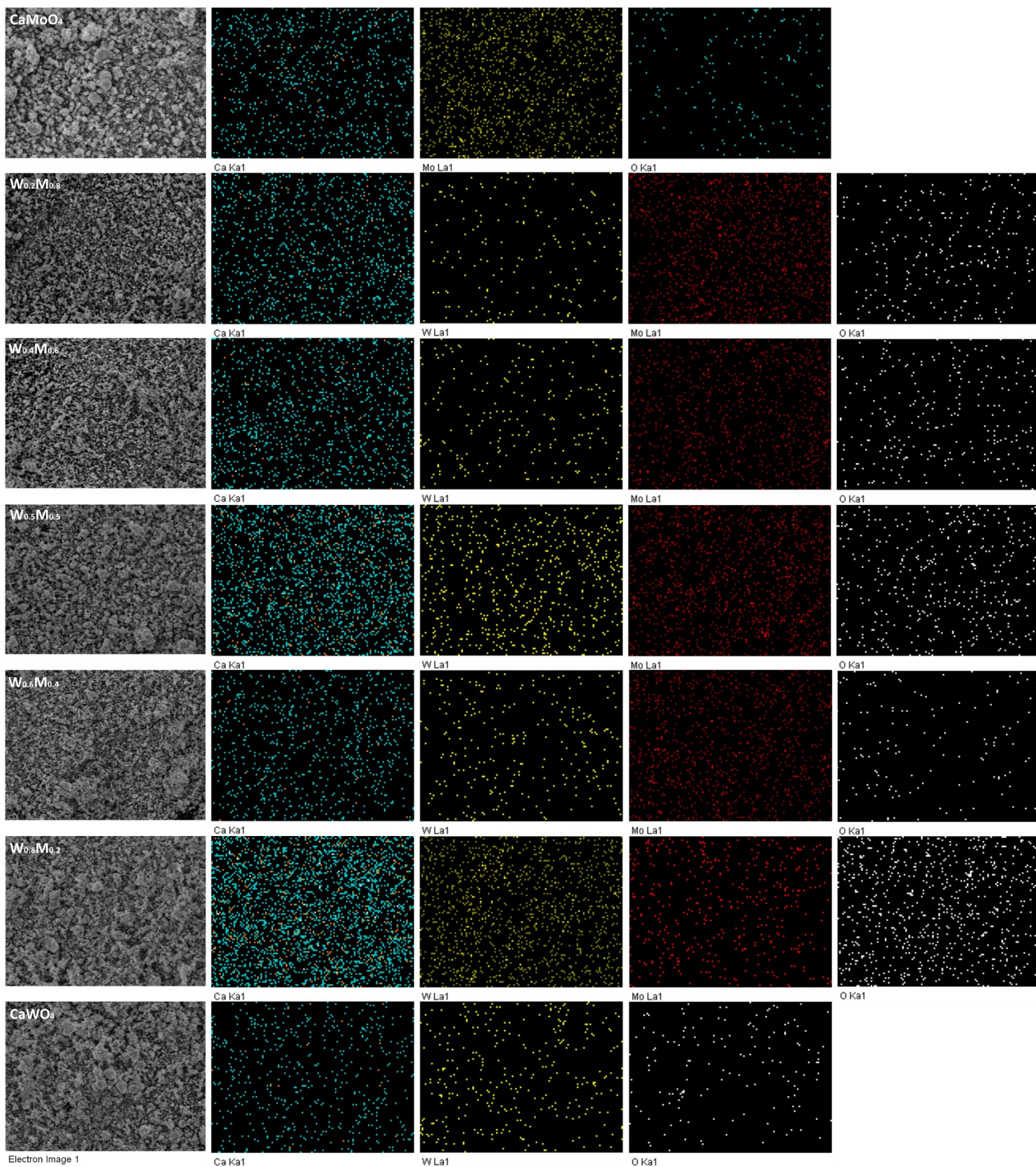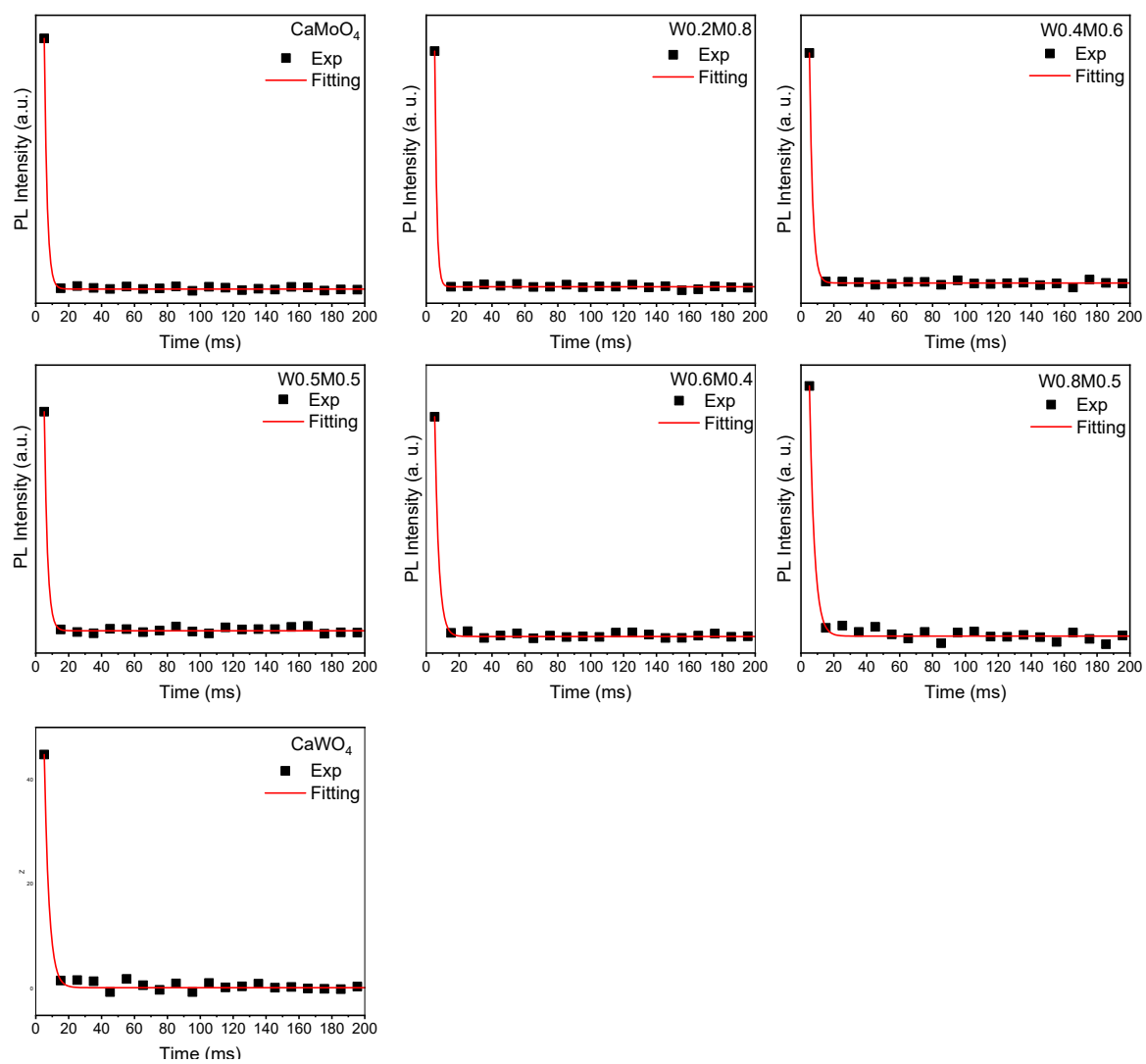Figure S1. Particle Size distribution of the prepared solid solution samples

Figure S2. Elemental mapping of the solid solution samples

Figure S3. PL lifetime curves