

Surface Alloying in Silver-Cobalt through a Second Wave Solution Combustion Synthesis Technique

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Table S1. Elemental composition of catalyst using EDX analysis.

Element	AgCo-11	AgCo-12	AgCo-21
Silver(Ag)	10.41	11.52	40.09
Cobalt(Co)	27.35	44.35	10.73
Oxygen(O)	45.21	38.65	43.29
Carbon(C)	17.03	5.48	5.88

Table S2. Detailed analysis of deconvoluted Ag 3d xps spectrum.

Alloys	Ag ^{I*}			Ag ^{II*}			Ag ^{I**}			Ag ^{II**}		
	B.E(eV)	Area	%Area	B.E(eV)	Area	%Area	B.E(eV)	Area	%Area	B.E(eV)	Area	%Area
AgCo-11	366.9	990	7.2	369.54	2206	16.05	372.75	1529.53	11.13	375.96	888.9	6.47
AgCo-12	366.56	933	8.18	369.80	1188	10.42	372.62	1173	10.28	375.8	588.2	5.16
AgCo-21				370.04	3448	28.13				375.60	1294	10.56

Table S3. XPS energy levels of deconvoluted Co 2p and its corresponding areas (in brackets).

Alloys	Co ³⁺	Co ²⁺	Sat 1	Sat 2
AgCo-11	779.82	781.9		
	(36003)	(20882)	786.83	803.36
	794.89	797.01	(26925)	(12444)
	(13820)	(9897)		
AgCo-12	780.11	782.23		
	(45117)	(36142)	787.43	803.07
	795	797	(24298)	(8057)
	(22337)	(11038)		
AgCo-21	779.6	782.03		
	(40795)	(31004)	787.3	803.5
	794.7	797.01	(24151)	(8842)
	(19896)	12222		