

Table 4 The all conditions studied for sol-gel formation.

Ni(II) salts used for precursor preparation	Notation of nickel precursor	Solvents								
		ethanol			n-propanol			iso-propanol		
		Wt (g)	Conc. (%w/v)	pH	Wt (g)	Conc. (%w/v)	pH	Wt (g)	Conc. (%w/v)	pH
Ni(NO ₃) ₂ ·6H ₂ O	SPNO	4.0	16.0	6.0, 7.0, 8.0, 9.0, 10.0	4.0	16.0	6.0, 7.0, 8.0, 9.0, 10.0	4.0	16.0	6.0, 7.0, 8.0, 9.0, 10.0
		5.0	20.0	6.0, 7.0, 8.0, 9.0, 10.0	5.0	20.0	6.0, 7.0, 8.0, 9.0, 10.0	5.0	20.0	6.0, 7.0, 8.0, 9.0, 10.0
		6.0	24.0	6.0, 7.0, 8.0, 9.0, 10.0	6.0	24.0	6.0, 7.0, 8.0, 9.0, 10.0	6.0	24.0	6.0, 7.0, 8.0, 9.0, 10.0
		7.0	28.0	6.0, 7.0, 8.0, 9.0, 10.0	7.0	28.0	6.0, 7.0, 8.0, 9.0, 10.0	7.0	28.0	6.0, 7.0, 8.0, 9.0, 10.0
		8.0	32.0	6.0, 7.0, 8.0, 9.0, 10.0	8.0	32.0	6.0, 7.0, 8.0, 9.0, 10.0	8.0	32.0	6.0, 7.0, 8.0, 9.0, 10.0
Ni(Ac) ₂ ·4H ₂ O	SPAc	4.0	16.0	7.0, 8.0, 9.0, 10.0, 11.0	4.0	16.0	7.0, 8.0, 9.0, 10.0, 11.0	4.0	16.0	7.0, 8.0, 9.0, 10.0, 11.0
		5.0	20.0	7.0, 8.0, 9.0, 10.0, 11.0	5.0	20.0	7.0, 8.0, 9.0, 10.0, 11.0	5.0	20.0	7.0, 8.0, 9.0, 10.0, 11.0
		6.0	24.0	7.0, 8.0, 9.0, 10.0, 11.0	6.0	24.0	7.0, 8.0, 9.0, 10.0, 11.0	6.0	24.0	7.0, 8.0, 9.0, 10.0, 11.0
		7.0	28.0	7.0, 8.0, 9.0, 10.0, 11.0	7.0	28.0	7.0, 8.0, 9.0, 10.0, 11.0	7.0	28.0	7.0, 8.0, 9.0, 10.0, 11.0
		8.0	32.0	7.0, 8.0, 9.0, 10.0, 11.0	8.0	32.0	7.0, 8.0, 9.0, 10.0, 11.0	8.0	32.0	7.0, 8.0, 9.0, 10.0, 11.0