Table S1: Comparison of the binding energies (eV) for C_{1s}, O_{1s} and Cl_{2p}

	C 1s	O 1s	Cl 2p
$HOCH_2CH_2CH_2Cl/Si(100)$[a]			
$HO–C^1H_2C^2H_2C^3H_2–Cl$	286.5 for C^1, C^3	533.1	201.9($2p_{1/2}$)
	285.4 for C^2		200.3($2p_{3/2}$)
$Si–O–C^1H_2C^2H_2C^3H_2–Cl$	286.6 for C^1, C^3	532.2	202.0($2p_{1/2}$)
	285.5 for C^2		200.4($2p_{3/2}$)
$Si–O–C^1H_2C^2H_2C^3H_2C^3H_2C^2H_2C^1H_2$	286.5 for C^1	532.3	
$–O–Si$	285.5 for C^2, C^3		
$CH_2Cl(CH_3)_2COH/Ni(100)$[b]			
$CH_2Cl(CH_3)_2COH$		532.8	202.0($2p_{1/2}$)
			200.2($2p_{3/2}$)
$–CH_2(CH_3)_2COH$		532.8	
$–CH_2(CH_3)_2CO–$		531.7	
O–		530.2	
Cl–			200.1($2p_{1/2}$)
			198.4($2p_{3/2}$)
$ICH_2CH_2OH/Ni(100)$[c]			
ICH_2CH_2OH		532.8	
$ICH_2CH_2O–$		531.8	
O–		530.8	
$CO/Ni(111)$[d]			
Hollow	285.24	530.86	
Bridge	285.32	531.01	
On-top	285.96	532.15	
$C_2H_4/Ni(111)$[e]			
C_2H_4	284.0		
C_2H_2	283.5		

a – e: References 26, 9, 6, 27 and 28.