

Table S1. Selected bond lengths [Å] and bond angles [°] of [Ti₄O₄(OⁱBu)₁₀(asp)₂] \cdot H₂O (**1**).

Bond Lengths			
Ti1-O71	1.785(2)	Ti3-O101	1.793(2)
Ti1-O6	1.840(2)	Ti3-O6	1.835(2)
Ti1-O61	1.971(2)	Ti3-O41	1.967(2)
Ti1-O31	2.014(2)	Ti3-O51	2.028(2)
Ti1-O5	2.0485(19)	Ti3-O5	2.053(2)
Ti1-O1	2.160(2)	Ti3-O12	2.158(2)
Ti2-O91	1.797(3)	Ti4-O121	1.787(2)
Ti2-O81	1.800(3)	Ti4-O111	1.821(2)
Ti2-O31	2.011(2)	Ti4-O51	2.008(2)
Ti2-O11	2.041(2)	Ti4-O2	2.039(2)
Ti2-O5	2.0561(19)	Ti4-O5	2.070(2)
Ti2-O41	2.104(2)	Ti4-O61	2.078(2)
Ti1-Ti3	2.9608(9)	Ti3-Ti4	3.1883(12)
Ti1-Ti4	3.1445(9)	Ti2-Ti3	3.1387(9)
Ti1-Ti2	3.1870(9)	Ti2-Ti4	3.9780(11)
Bond angles			
O(71)-Ti(1)-O(6)	100.39(10)	O(101)-Ti(3)-O(6)	99.51(10)
O(71)-Ti(1)-O(61)	102.87(10)	O(101)-Ti(3)-O(41)	102.95(10)
O(6)-Ti(1)-O(61)	93.51(10)	O(6)-Ti(3)-O(41)	93.48(9)
O(71)-Ti(1)-O(31)	99.89(10)	O(101)-Ti(3)-O(51)	99.13(10)
O(6)-Ti(1)-O(31)	98.33(10)	O(6)-Ti(3)-O(51)	99.65(10)
O(61)-Ti(1)-O(31)	151.94(9)	O(41)-Ti(3)-O(51)	152.02(9)
O(71)-Ti(1)-O(5)	176.65(10)	O(101)-Ti(3)-O(5)	176.07(10)
O(6)-Ti(1)-O(5)	80.13(9)	O(6)-Ti(3)-O(5)	80.12(9)
O(61)-Ti(1)-O(5)	80.37(8)	O(41)-Ti(3)-O(5)	80.98(8)
O(31)-Ti(1)-O(5)	76.76(8)	O(51)-Ti(3)-O(5)	77.12(8)
O(71)-Ti(1)-O(1)	94.11(10)	O(101)-Ti(3)-O(12)	93.90(10)
O(6)-Ti(1)-O(1)	165.19(9)	O(6)-Ti(3)-O(12)	166.14(9)
O(61)-Ti(1)-O(1)	80.26(9)	O(41)-Ti(3)-O(12)	80.04(8)
O(31)-Ti(1)-O(1)	81.96(9)	O(51)-Ti(3)-O(12)	81.52(9)
O(5)-Ti(1)-O(1)	85.56(8)	O(5)-Ti(3)-O(12)	86.74(8)
O(91)-Ti(2)-O(81)	97.45(14)	O(121)-Ti(4)-O(111)	96.64(12)
O(91)-Ti(2)-O(31)	98.17(10)	O(121)-Ti(4)-O(51)	100.68(11)
O(81)-Ti(2)-O(31)	97.44(10)	O(111)-Ti(4)-O(51)	97.55(10)
O(91)-Ti(2)-O(11)	91.20(10)	O(121)-Ti(4)-O(2)	87.87(10)
O(81)-Ti(2)-O(11)	97.50(10)	O(111)-Ti(4)-O(2)	96.69(10)
O(31)-Ti(2)-O(11)	161.16(8)	O(51)-Ti(4)-O(2)	162.40(9)
O(91)-Ti(2)-O(5)	95.55(11)	O(121)-Ti(4)-O(5)	96.38(10)
O(81)-Ti(2)-O(5)	166.39(12)	O(111)-Ti(4)-O(5)	166.67(10)
O(31)-Ti(2)-O(5)	76.65(8)	O(51)-Ti(4)-O(5)	77.18(8)
O(11)-Ti(2)-O(5)	86.24(8)	O(2)-Ti(4)-O(5)	86.66(8)
O(91)-Ti(2)-O(41)	171.09(10)	O(121)-Ti(4)-O(61)	168.90(10)
O(81)-Ti(2)-O(41)	89.72(12)	O(111)-Ti(4)-O(61)	90.17(11)
O(31)-Ti(2)-O(41)	86.09(9)	O(51)-Ti(4)-O(61)	87.05(9)
O(11)-Ti(2)-O(41)	82.57(8)	O(2)-Ti(4)-O(61)	82.62(9)
O(5)-Ti(2)-O(41)	77.75(8)	O(5)-Ti(4)-O(61)	77.43(8)
Ti(1)-O(5)-Ti(4)	99.56(8)	Ti(1)-O(5)-Ti(3)	92.41(8)
Ti(3)-O(5)-Ti(4)	101.30(8)	Ti(1)-O(5)-Ti(2)	101.87(8)

Ti(2)-O(5)-Ti(4)	149.23(10)	Ti(3)-O(5)-Ti(2)	99.60(9)
Ti(3)-O(6)-Ti(1)	107.33(11)		
Ti(3)-Ti(1)-Ti(4)	62.88(3)	Ti(1)-Ti(4)-Ti(3)	55.744(18)
Ti(3)-Ti(2)-Ti(1)	55.81(2)	Ti(1)-Ti(3)-Ti(2)	62.92(2)
Ti(3)-Ti(1)-Ti(2)	61.27(2)	Ti(1)-Ti(3)-Ti(4)	61.38(2)
Ti(4)-Ti(1)-Ti(2)	77.85(3)	Ti(2)-Ti(3)-Ti(4)	77.91(2)

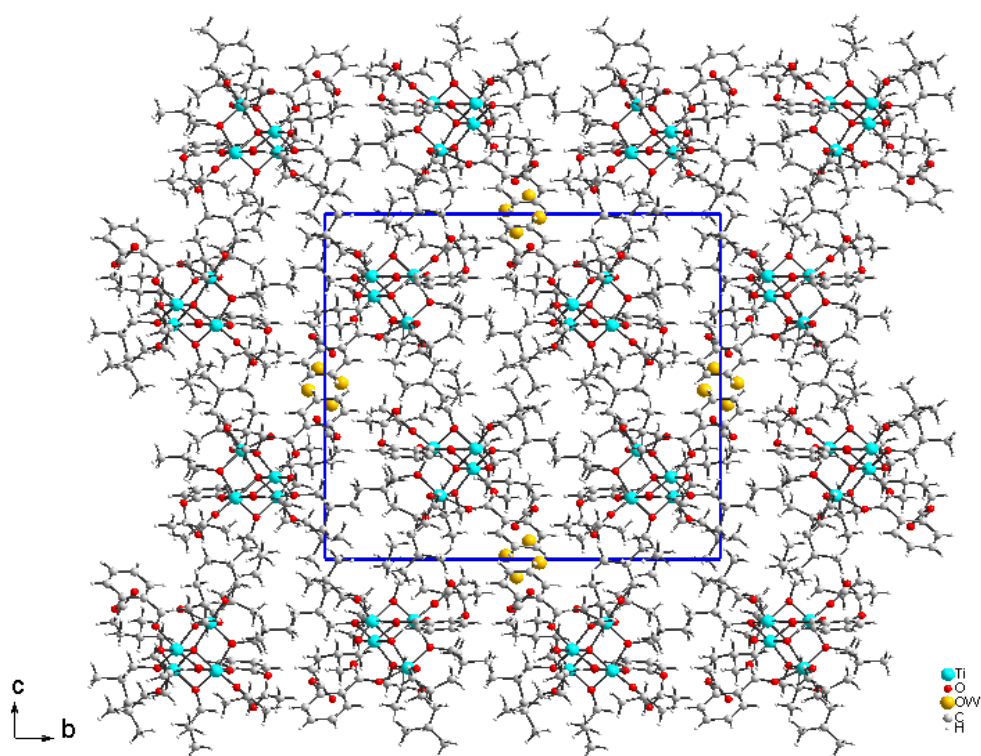


Figure S1. The crystal network of (1) along a axis shows densely packed titanium clusters. Water molecules (OW) are marked in orange and circled.

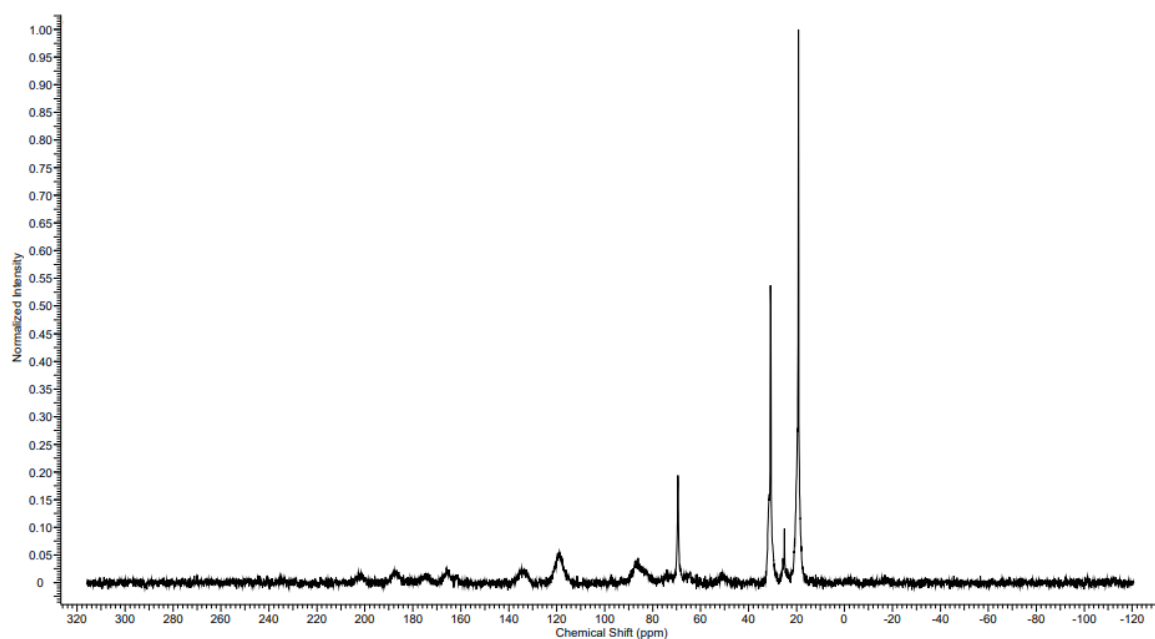


Figure S2. ^{13}C NMR spectrum of (1) in the solid phase.

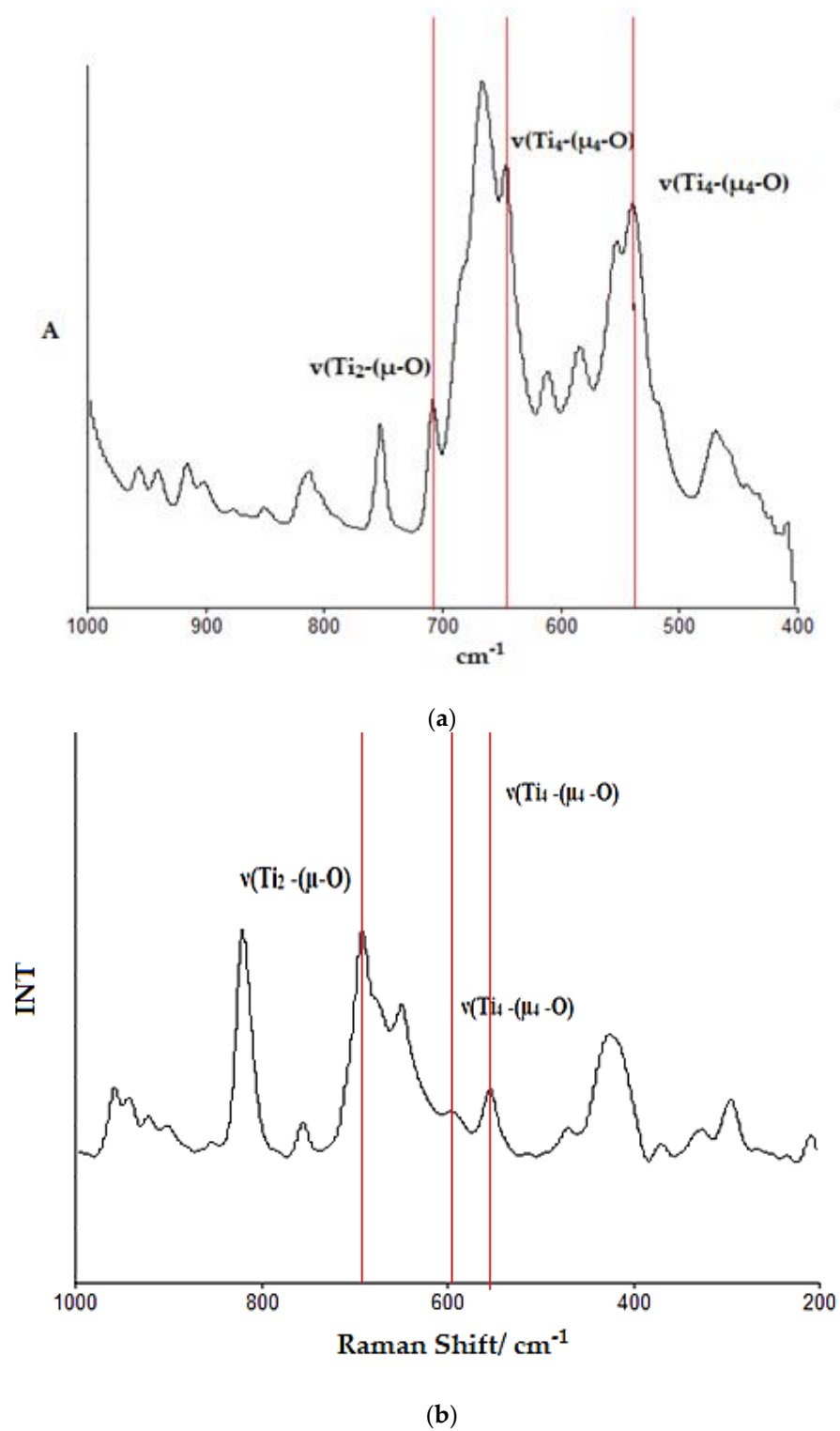


Figure S3. The IR (a) and Raman (b) spectra of the complex (1).

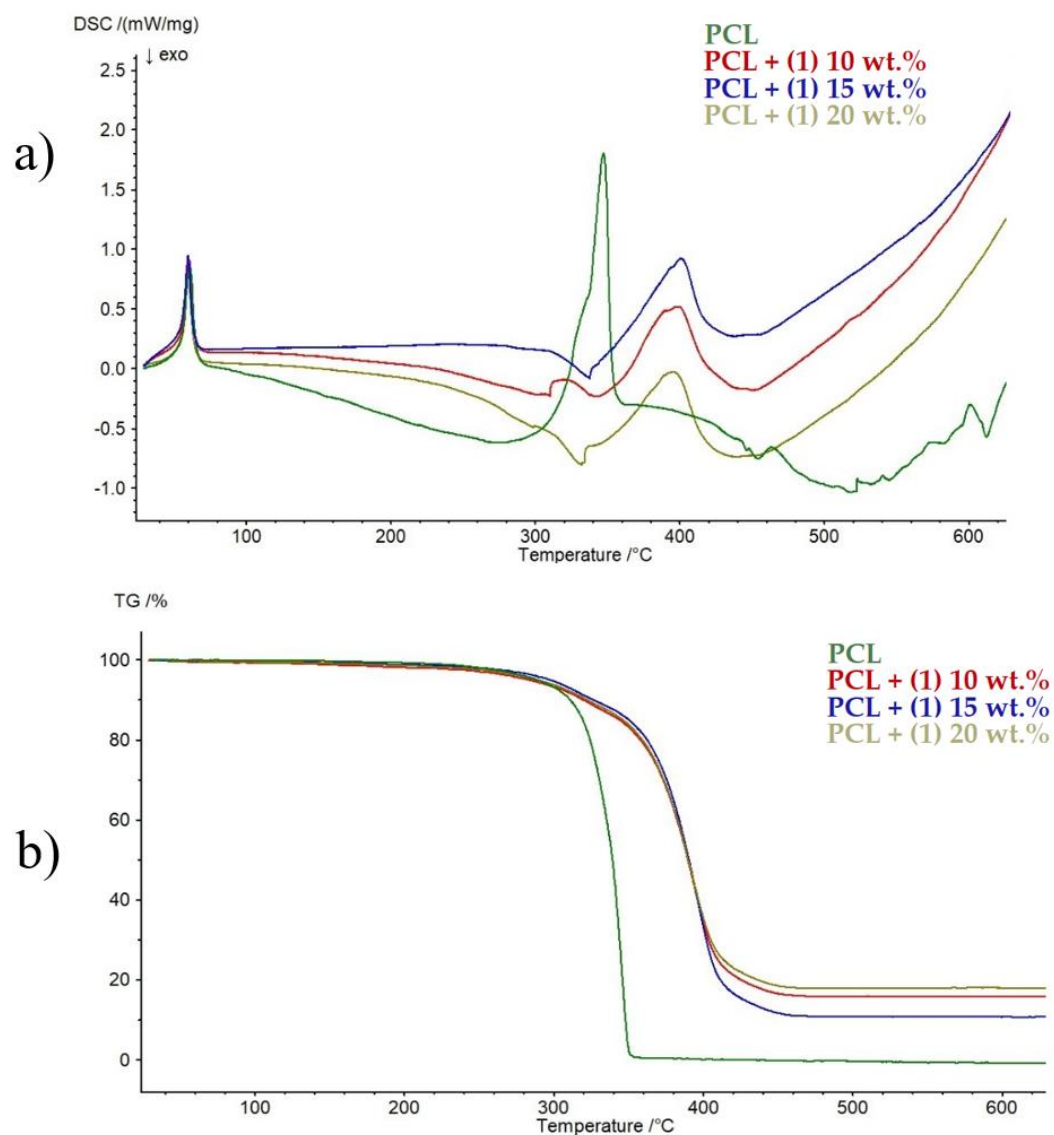


Figure S4. Differential scanning calorimetry curves (DSC) (a) and thermogravimetric curves (TG) and (b) of the produced composite materials and PCL.

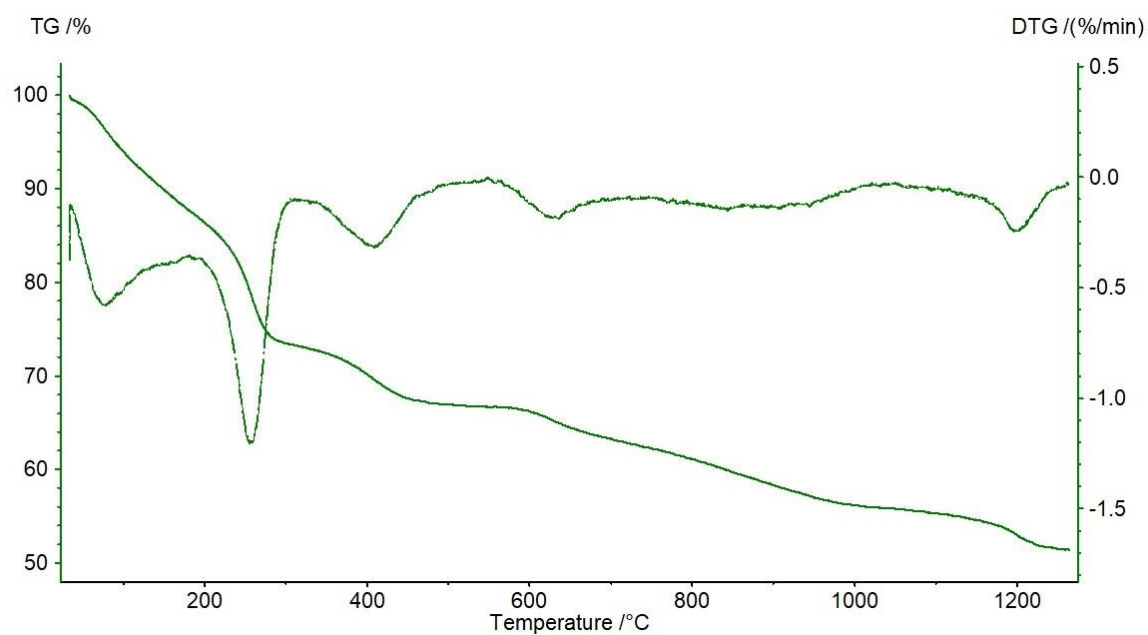


Figure S5. Thermogravimetric (TG) and derivative thermogravimetric (DTG) curves registered for (1) between 20 and 1300 °C.

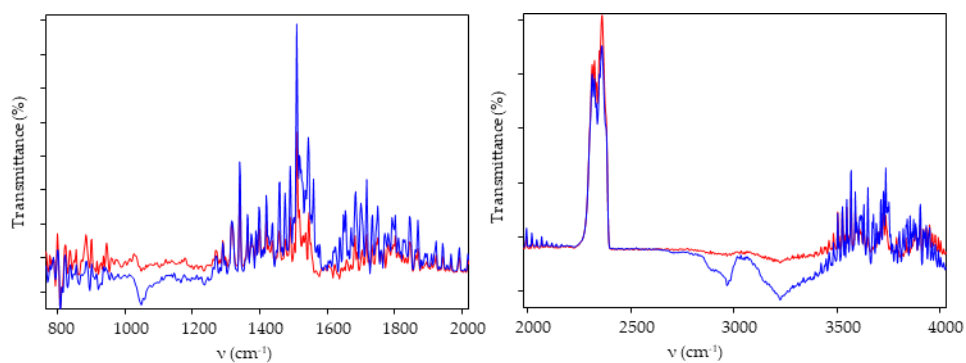


Figure S6. IR spectra of the volatile thermolysis products of (1), registered in the range 35–150 °C (red line—35 °C, blue line—150 °C).

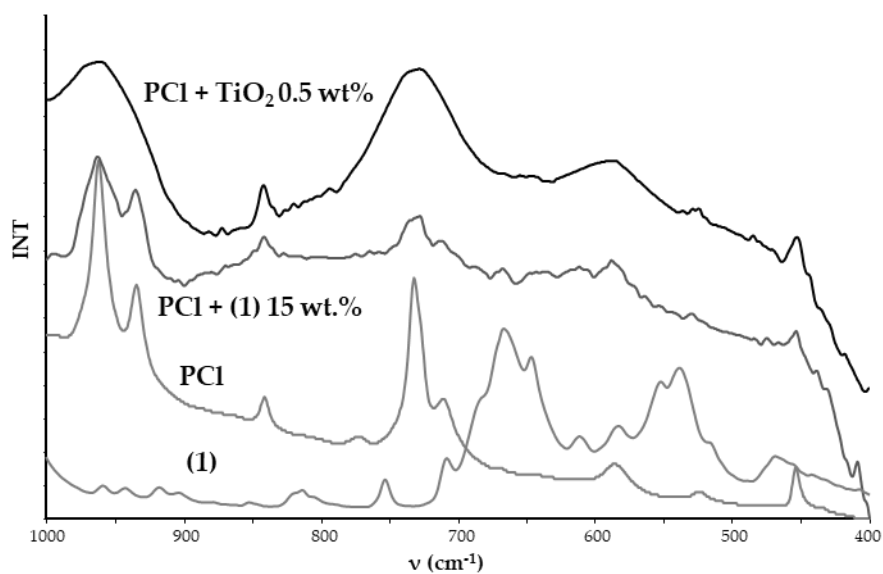


Figure S7. IR spectra of PCL + TiO₂ 0.5 wt.%, PCL + (1) 15 wt.% samples, PCL, and (1).

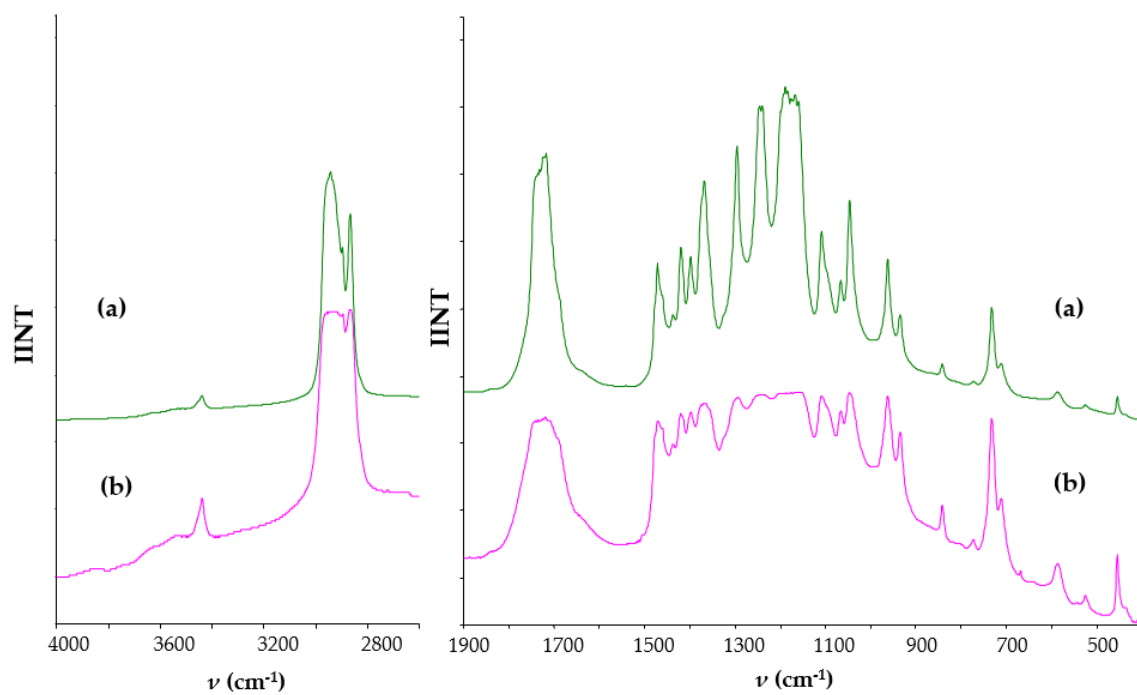


Figure S8. IR spectra of PCL before (a) and after (b) photocatalytic process. .