

**Negatively charged singly-bonded dimers of substituted $C_{1-}[C_{70}(CF_3)_{10}]$ and
unsubstituted $[C_{70}]$ fullerenes.**

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Supporting information.

Table S1. IR spectra of the starting compounds and salts **1** and **2**.

Components	C ₁ - C ₇₀ (CF ₃) ₁₀	C ₇₀	cryptand[2.2.2]	{ cryptand[2.2.2](K ⁺) } ₂ { C ₇₀ (CF ₃) ₁₀ ⁻ } ₂ ·0.71C ₆ H ₁₄ ·0.20C ₆ H ₄ Cl ₂ (1)	{ cryptand[2.2.2](K ⁺) } ₂ (C ₇₀ ⁻) ₂ ·2.25C ₆ H ₄ Cl ₂ ·0.75C ₆ H ₁₄ (2)
Fullerene	-	457w		510w	451w
	-	534s		524w*	471w*
	601w	564m		604w	506w
	654w	576s		658w	530m*
	669w	642m		665w	548w
	708m	673m		706w	555w
	713w sp	794m			574w
	716w sp	1132w		712m	659w
	727m	1413w		728w	669w*
	732m	1429s			695w
	737s			736w*	711w
	744m			-	720w
	748m			748m	789w
	754m			-	800m
	790w			800w	842w
	-			813w	888w
	816m			847w	1101vs*
	866w			879w	1155w
	-			900w	1176w
	902w			-	1209w*
	925w			934w	1257w
	938w			940w	1278w
	945m			-	1278w
	963m			-	1392m
	977w			-	1428s
	988w			-	1455s*
	1012w			1008w	1479w*
	1035w			-	1550w
	1048m			1056w	
	1093w sp			-	
	1100w sp			-	
	1176vs			-	
	1197s			1165s sh	
	1239s			1191s	
1458w			1251vs		
			1459w*		
			-		
Cryptand[K ⁺]			476w	524w	471w*
			528w	-	528m*
			581w	735m*	574w*
			735m	921w	750s*
			922m	952m	938s
			948w	979w	-
			982m	1044m	983w
			1038w	1084m	1033m*
			1071m	1107vs	1056w
			1100s	1135m	1101vs*
			1127s	-	1132m
			1213w	1297w	1209w*
			1295m	-	1298w
			1329m	1355m	1323w
			1360s	1448w	1354s
			1446m	1459w*	1455s*
			1462m	1479w	-
			1490w	2817w	1479w*
			2790w	2886w	
			2877w	2968w	2879w
		2943w		2940w	
C ₆ H ₄ Cl ₂					750s*
					669w
					1033m*
					1455s*

w – weak, m – middle, s – strong, vs – very strong intensity; * – the bands are coincided.

IR spectra of pristine compounds and salts 1 and 2.

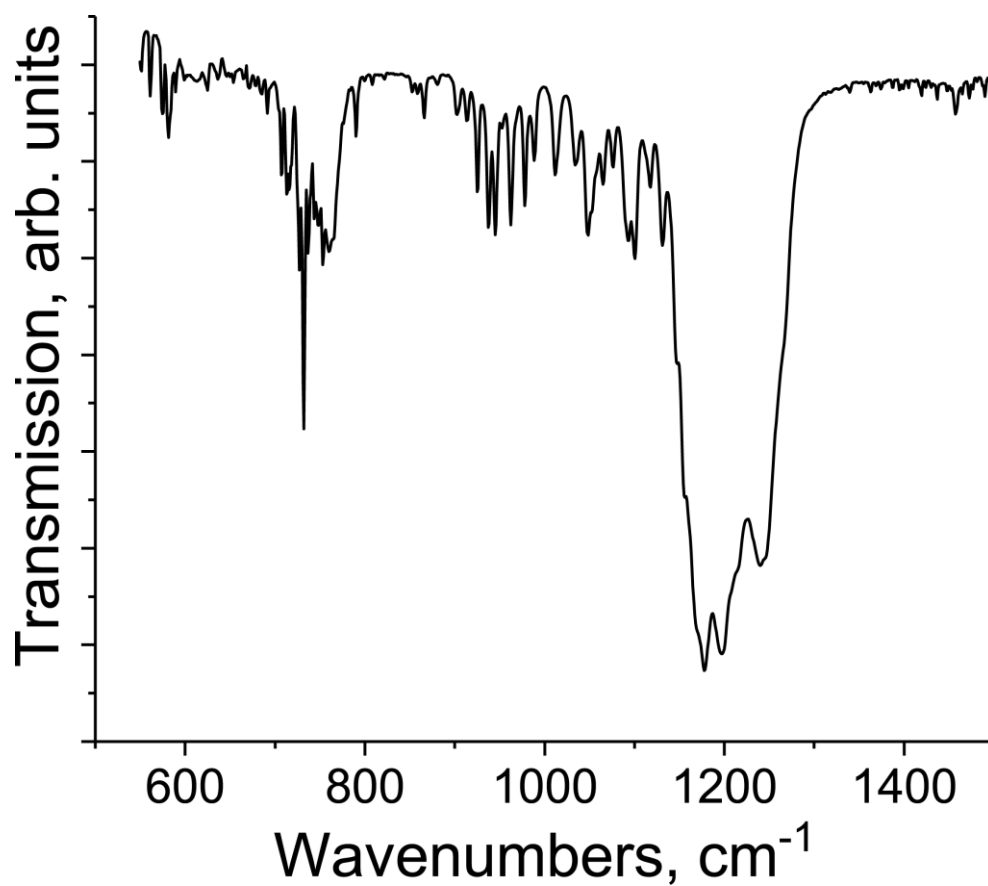


Fig. S1. IR spectrum of pristine $C_1-C_{70}(CF_3)_{10}$ on the diamond/ZnSe window .

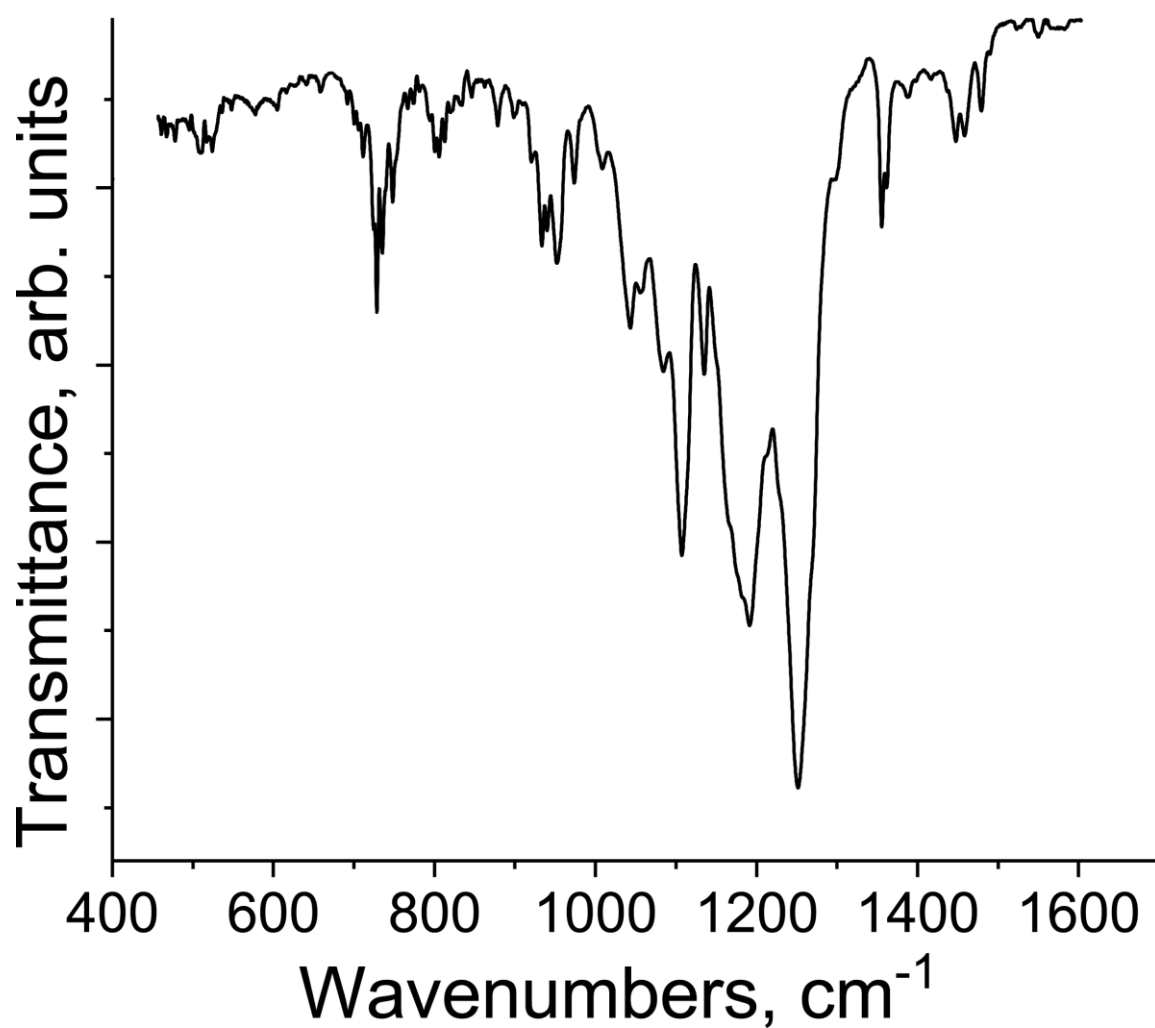


Fig. S2. IR spectrum of salt $\{\text{cryptand}[2.2.2](\text{K}^+)\}_2\{\text{C}_{70}(\text{CF}_3)_{10}^-\}_2 \cdot 0.71\text{C}_6\text{H}_{14} \cdot 0.20\text{C}_6\text{H}_4\text{Cl}_2$ (**1**) in KBr pellet prepared in an anaerobic conditions.

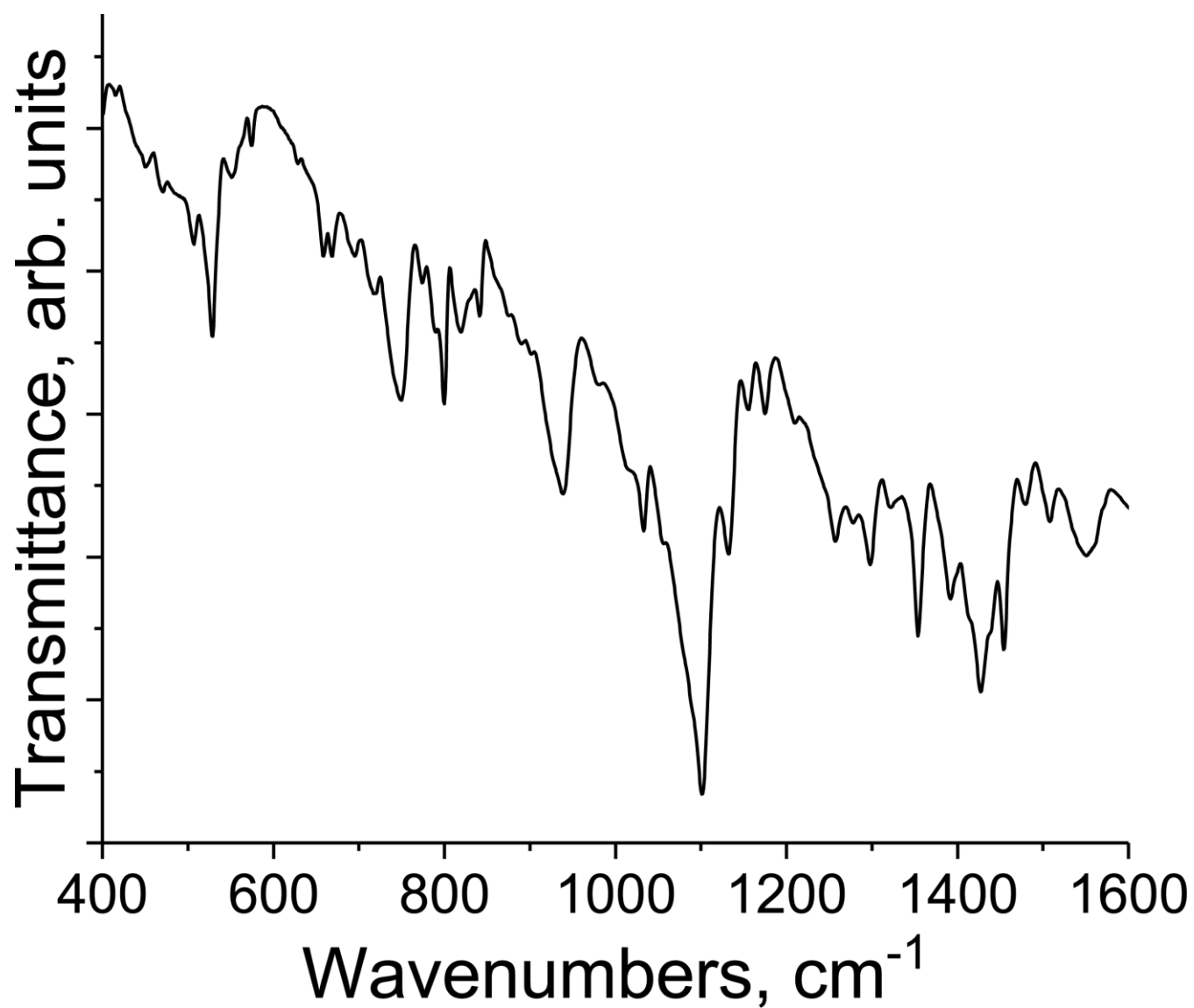


Fig. S3. IR spectrum of salt {cryptand[2.2.2](K⁺)₂(C₇₀⁻)₂·2.25C₆H₄Cl₂·0.75C₆H₁₄ (2) in KBr pellet prepared in an anaerobic conditions.