Supplementary material for the manuscript

"Effective magnetic coupling with strong spin frustration in (Ph_3MeP^+)($C_{60}^{\bullet-}$) and reversible $C_{60}^{\bullet-}$ dimerization in (Ph_3MeP^+)($C_{60}^{\bullet-}$)·C_6H_5CN . Effect of solvent on structure and properties" by

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IR- spectra.

Components	Ph_3MePBr	C_{60}	C_6H_5CN	$(Ph_3MeP^+)(C_{60}^{\bullet-})$ (**1**)	$(Ph_3MeP^+)(C_{60}^{\bullet-})\cdot C_6H_5CN$ (**2**)
Ph_3MeP^+	432m			446w	447w
	488w			488m	488m
	506s sp			506s*	507s*
	514s sp			-	-
	567m			575s*	575s*
	684s sp			686s	686s*
	692s sp			-	-
	696s sp			-	-
	718s			716s	718s
	-			735m	736m
	743s			746m	745m
	751s			751m	751m*
	762s			760m	761m
	903s sp			-	-
	911s sp			912m	913m
	927m			927m	927m
	997w			998w	997w
	1117s			1116s	1116s
	1340w			1340w	1338w
	1437s			1437s	1436s*
	1486w			1485w	1485w
	1587w			1586w	1587w
	1630w			-	-
	2879w			2873w	2871w
	2917w			2915w	2912w
	2935w			-	-
	3054w			3054w	3053w
C_{60}		526s		506s*	507s*
		576m		575s*	575s*
		1182m		-	-
		1429s		1391s	1390s
C_6H_5CN			554w		-
			686w		686s*
			754s		751m*
			1445w		1435s*
			2235w		2223w

Table S1. IR-spectra (cm^{-1} in KBr) of starting compounds and salts **1** and **2**.
* Bands are overlapped, w-weak intensity, m – middle intensity, s – strong intensity, sp – split bands

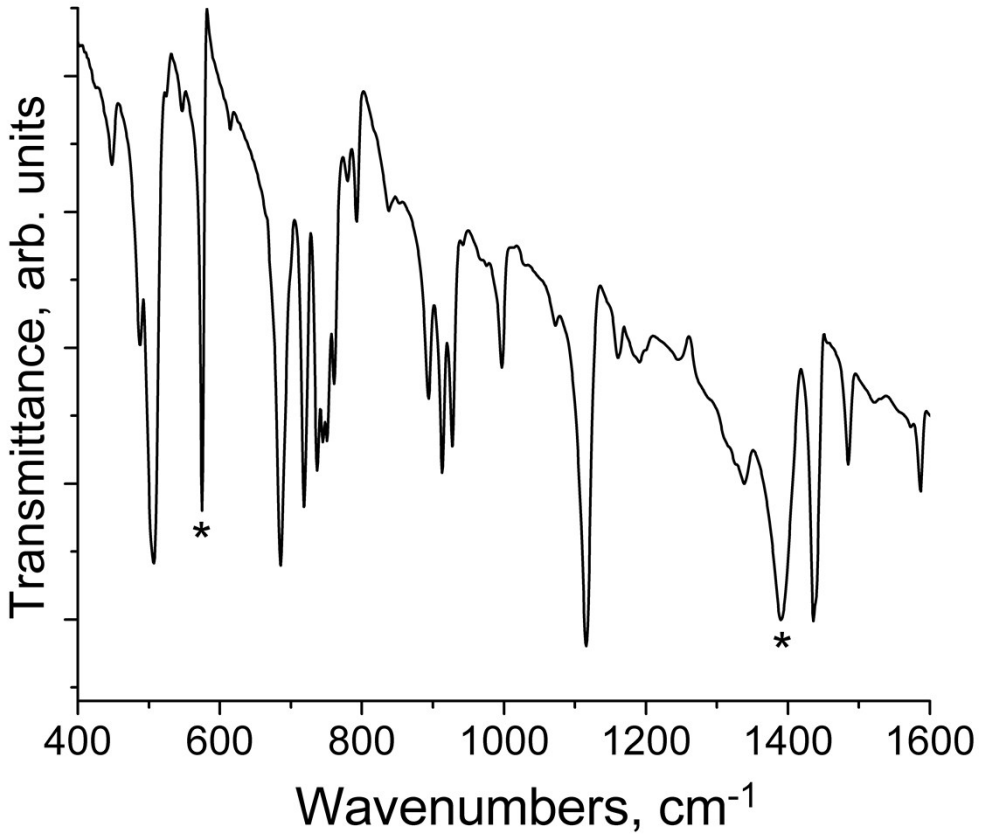

Fig. S1. IR-spectrum of **2** measured in KBr pellet prepared in anaerobic conditions. Absorption bands of C_{60} are marked by asterisks. Salt **1** has similar IR-spectrum.

EPR spectrum of salt **2**.

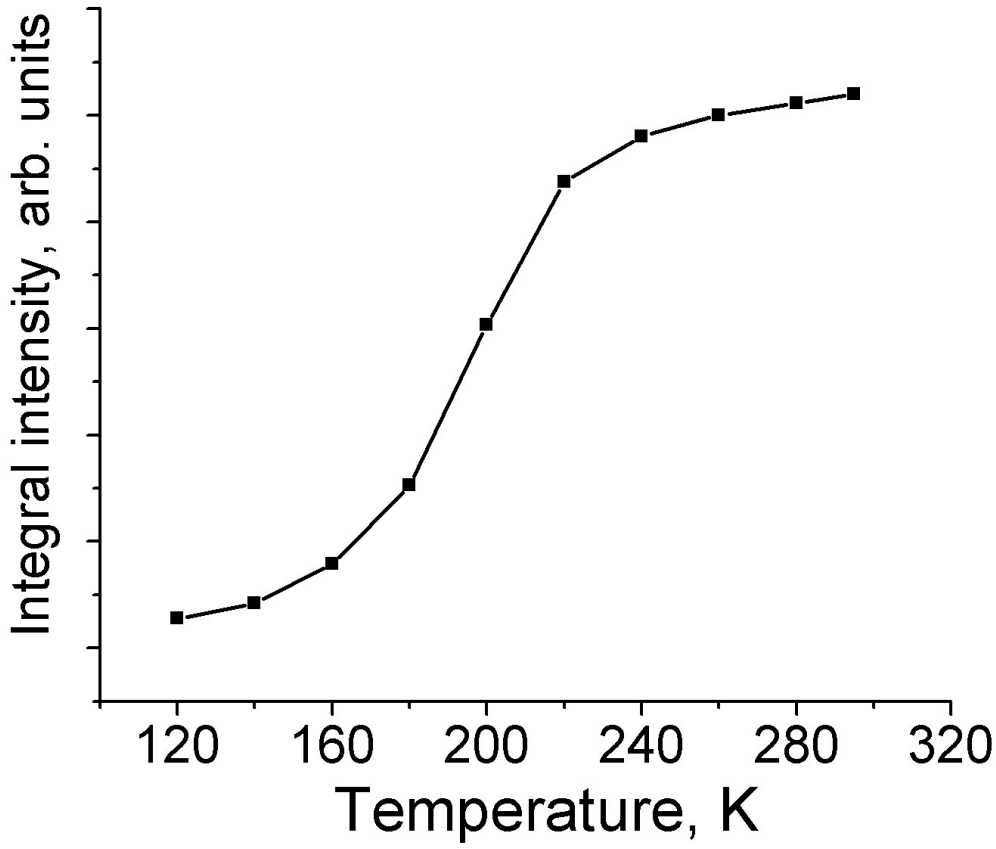

Fig. S2. Temperature dependence of integral intensity of EPR signal of salt **2** in the 120-295 K range.