



Radical cation salts of TTF donors with XF₆ (X = Re, Ta) anions

Submitted by Cécile Mézière on Wed, 07/05/2017 - 17:59

Titre Radical cation salts of TTF donors with XF₆ (X = Re, Ta) anions

Type de publication Communication

Type Communication par affiche dans un congrès

Année 2017

Langue Anglais

Date du colloque 02-04/05/2017

Titre du colloque Journées scientifiques 2017 SCF-BPL

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Pays France

Ville Angers

Mots-clés Electrocrystallization [9], hexafluororhenate [10], hexafluorotantalate [11], TTF donors [12]

Résumé en anglais
 Electrocrystallization of the dianionic Re(IV)F₆ species with different organic π electron donors was carried out. Depending on the first oxidation potential of the TTF derivatives this crystallization technique gave rise to various radical cations salts involving Re(IV) or Re(V) anions. With tetramethyltetrathiafulvalene (TMTTF) the (TMTTF)₂Re(IV)F₆ salt was obtained. However, with tetramethyltetraselenafulvalene (TMTSeF) we obtained very small needles of the (TMTSeF)₂Re(V)F₆ system, analogue to the so called "Bechgaard salts" [1]. We present some characteristics of this new metallic phase. We compare to the diamagnetic (TMTSeF)₂Ta(V)F₆ obtained by the same strategy using TBATaF₆ prepared according to the Brownstein's method [2] and explore electrocrystallization of the tantalum based anions [3], [4].

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