

# Synthese von Lithiumsalzen mit zweifach geladenen Anionen für Sekundärbatterien

Synthesis of Novel Lithium Salts with Doubly Charged Anions for Secondary Batteries

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$\alpha,\omega$ -Perfluoro Alkanebis(sulfonylfluorides), <sup>19</sup>F NMR Data, Bis(trifluoromethylsulfonyl)-methane, Lithium Salts, Conductivity

Lithium salts with doubly charged anions have been prepared from  $\alpha,\omega$ -perfluoro alkanebis(sulfonylfluorides), bis(trifluoromethylsulfonyl)methane, and sodium trifluoromethylsulfonyl(trimethylsilyl)amide:  $\text{Li}_2[\text{R}-(\text{CF}_2)_n-\text{R}']$  with  $\text{R} = \text{SO}_2\text{O}$ ,  $\text{R}' = \text{SO}_2\text{NSO}_2\text{CF}_3$  for **6a** ( $n = 1$ ),  $\text{R} = \text{R}' = \text{SO}_2\text{NSO}_2\text{CF}_3$  **5a** ( $n = 1$ ),  $\text{R} = \text{SO}_2\text{NSO}_2\text{CF}_3$ ,  $\text{R}' = \text{SO}_2\text{C}(\text{SO}_2\text{CF}_3)_2$  for **7a** ( $n = 1$ ) and  $\text{R} = \text{R}' = \text{SO}_2\text{C}(\text{SO}_2\text{CF}_3)_2$  for **8a, c** ( $n = 1, 3$ ).

The formation and physical properties (conductivity and <sup>19</sup>F NMR) of these compounds are discussed. An X-ray structure analysis ( $T = 293 \text{ K}$ ) was performed for the *di*-caesium hexafluoropropanyl-1,3-bis[sulfonyl-bis(trifluoromethylsulfonyl)methanide] (**15c**).

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