

arenes/perfluoroarenes co-crystals. The second question is: Can the weak influence of secondary interactions of fluorine substituents on the crystal packing be amplified through the increase in the number of fluorine atoms?

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Fruitful and Fruitless Resolution of *N*-(nitrobenzoyl)-DL-Alanine by Brucine. Agata Białońska^a, Zbigniew Ciunik^a. ^a*Faculty of Chemistry, University of Wrocław, 14. F. Curie-Joliot, 50-383 Wrocław, Poland.*

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Brucine is one of the most frequently used resolving agents for resolution of racemic acids [1]. It seems to be highly selective for a given enantiomer, and reveals a low selectivity for various compounds. Both these features allow using brucine to the separation of a wide spectrum of racemic acids (CSD version 5.29 (November 2007)) [2]. Among other, brucine is suitable resolving agent for racemic resolution of *N*-(4-nitrobenzoyl)-DL-alanine, forming crystals of brucinium *N*-(4-nitrobenzoyl)-D-alaninate methanol disolvate (first fraction) (**1a**) and brucinium *N*-(4-nitrobenzoyl)-L-alaninate 7.25-hydrate (**1b**). However, during racemic resolution of *N*-(3-nitrobenzoyl)-DL-alanine, a solid solution of brucinium *N*-(3-nitrobenzoyl)-(DL)-alaninate ?-solvate was obtained (**2**).

Solid solution of brucinium *N*-(3-nitrobenzoyl)-(DL)-alaninate ?-solvate (**2**) and crystals of particular brucinium diastereomeric salts, one containing *N*-(3-nitrobenzoyl)-D- (**2a**) and other containing *N*-(3-nitrobenzoyl)-L-alaninate anions (**2b**) are quasi-isomorphous in relation to each other. In **2**, **2a** and **2b**, brucinium cations form common corrugated monolayer sheets. Similar corrugated layers are also observed in **1a**. In **1b**, another brucinium self-assembly is observed. In all the cases, cations and anions are linked by ionic N-H⁺...O⁻ hydrogen bonds. In **1a**, amide O atom of brucinium cations is involved in hydrogen bond, in which solvent molecules are its donor. In **1b**, **2**, **2a** and **2b** solvent molecules reveal a disorder. Comparison of the above structures shows that capability to formation of well-defined hydrogen bonds pattern between resolved compound, resolving agent and solvent molecules belongs to the main factors, which differentiate properties of the diastereomeric salts and influence on a sequence of their crystallization (**1a** and **1b**). Similar capabilities to formation of well-defined hydrogen bonds patterns are reflected in quasi-isomorphous crystals of **2a** and **2b**, as well as in the solid solution (**2**).

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