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## Hydrogen bonding in an organic-inorganic hybrid compound

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**Keywords:** hydrogen bonding, organic cations, inorganic anions

The present work is part of a systematic investigation of interactions between amino acids and various mineral acids [1]. The crystal structure of the organic-inorganic hybrid material engineered shows a stability that can be described as alternating layers of organic cations and mineral anions, one of which is disordered. Both layers are parallel to the *ac* plane. The main feature of this stacking is the presence of strong hydrogen bonds similar to those observed in other ionic compounds [2,3]. Anion entities are hydrogen bonded to the organic cations in two ways; first *via* the carboxylic acid group and second *via* the ammonium group, we do not observe any hydrogen bonds either between organic cations or between inorganic anions.

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[2] Pecaut, J. & Bagieu-Beucher, M. (1993) *Acta Cryst.* C49, 834-837.

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m13.p05

## First electro synthesis and structural characterization of an aryl ether trimer

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The crystal structure of a novel trimer formed by three *p-tert-butyl anisole* moieties was determined by X-ray diffraction method. Controlled potential electrolysis of *p-tert-butyl anisole* in acetonitrile leads to its two first oligomers, the 2,2'-dimethoxy-5,5'-di-*tert-butyl*biphenyl and the 1-methoxy-bis-2,3-(2'-methoxy-5'-*tert-butyl*phenyl)-4-*tert-butyl*benzene. The aryl ether trimer crystallizes in a P-1 triclinic unit cell with  $a = 10.571(3)$ ,  $b = 11.739(1)$ ,  $c = 12.733(2)$  Å,  $\alpha = 74.64(1)$ ,  $\beta = 88.71(2)$ ,  $\gamma = 76.58(2)$ ,  $V = 1480.8(5)$  Å<sup>3</sup> and  $Z = 2$ . The structural analysis reveals that two *p-tert-butyl anisole* moieties are linked in ortho position on a third *p-tert-butyl anisole* fragment (figure.1).

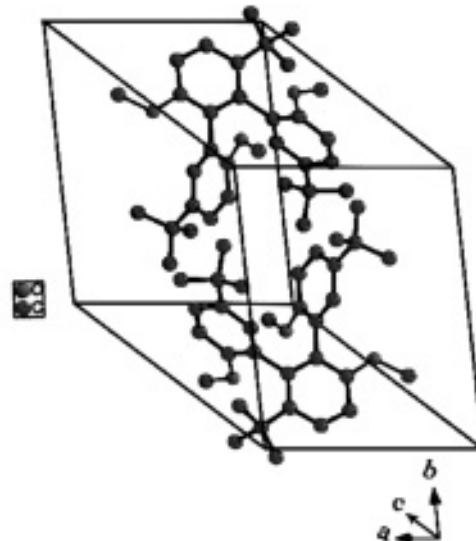


Figure 1: Projection of the structure of 1-methoxy-bis-2,3-(2'-methoxy-5'-*tert-butyl*phenyl)-4-*tert-butyl*benzene.