New Electroconducting Radical Anion Salts Based on TCNQ with Organic Cations

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X-ray study of the first molecular semiconductors based on TCNQ π -acceptor with pyrazine derivatives has been carried out: (N-Et-Pz)(TCNQ)₃ [1], [N-Et-2,5-di-Me-Pz](TCNQ)₂, [N-Me-2,5-di-Me-Pz](TCNQ)₂, [N-Me-tetra-Me-Pz](TCNQ)₂.



It has been established that the salts have a layered structure where conducting TCNQ layers alternate with non-conducting cationic layers. Lately organic and metal-containing TCNQ complexes have been gaining increased scientifics' interest since they can be used as organic sensors, high-speed optical memory devices, photo-switches, organic light emitting doides, bio-sensors etc. [2]. Among them the so called hybrid materials were revealed that combine magnetism and electroconductivity and even superconductivity [3,4].

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