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## C-16

**DETECTION OF SIGNED HOMONUCLEAR COUPLINGS BETWEEN  
LOW ABUNDANT NUCLEI**

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Detection of signed homonuclear couplings between low abundant nuclei, e.g.  $J(\text{C},\text{C})$  or  $J(\text{Si},\text{Si})$ , is an uneasy task. Until now no measured signs of  ${}^nJ(\text{Si},\text{Si})$ ,  $n > 1$ , were published and signed  ${}^nJ(\text{C},\text{C})$ ,  $n > 1$ , are very rare.

Recently we published CSEc [1] method for detection of signs of  ${}^nJ(\text{Si},\text{C})$ ,  $n > 1$ , couplings applicable to other pairs of low abundant nuclei as well. The subject of this lecture is a modification of CSEc method for detection of signed homonuclear couplings. The new sequence is neither trivial nor simple application of the CSEc but some tricks are used to design broadband pulse sequence without selective pulses.

The sequence was proved on a few samples by measuring carbon-carbon two- and three-bond couplings. For the first time signs of  ${}^2J(\text{Si}-\text{O}-\text{Si})$  couplings were measured on a set of siloxane oligomers with different bond maps. The results will be presented.

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