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Extra Byte
>in spin we trust

MnDOSY

Multi-nuclear Diffusion-Ordered NMR Spectroscopy done in novel ways

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What is MnDOSY ?

An NMR Spectroscopy software Tool that

- ✓ is community-oriented,
- ✓ reads data from any vendor (in progress),
- ✓ is driven by a strongly collaborative approach,
- ✓ is fast developing, under community requests

It is a tool for NMR spectroscopists trying to

- ✓ unravel distinct molecular components in mixtures,
- ✓ study dimerization and polymerization processes,
- ✓ study diffusion and self-diffusion
- ✓ study processes that affect molecular diffusion

Current state-of-the-art:

- ✓ Using fast Bayesian approach to DOSY transform
- ✓ Correlates X- and Y-nuclei DOSY spectra of a sample
- ✓ Tested with Bruker high-field DOSY data
- ✓ Tested with combination of 1H, 13C, and 29Si DOSY

Moving towards:

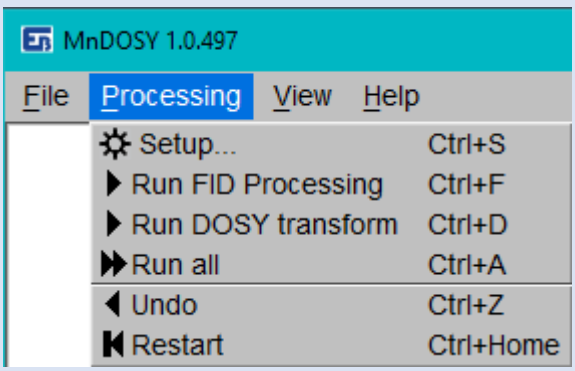
- ✓ Extending compatibility with other vendor's data
- ✓ Integration with high-resolution relaxometry

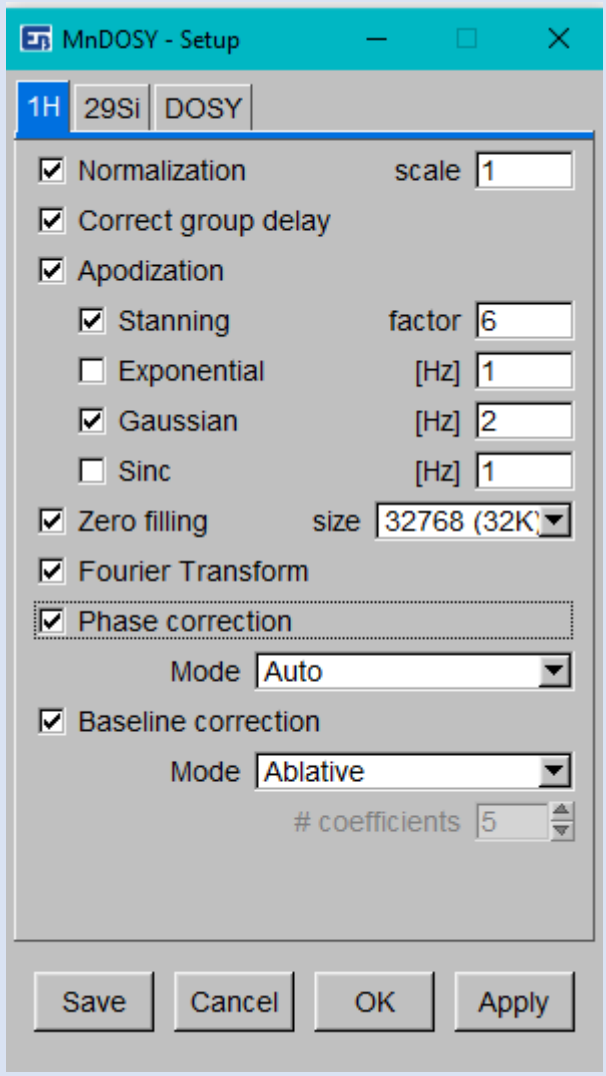
We will have a look at a sample of

a complicated mixture of silane oligomers

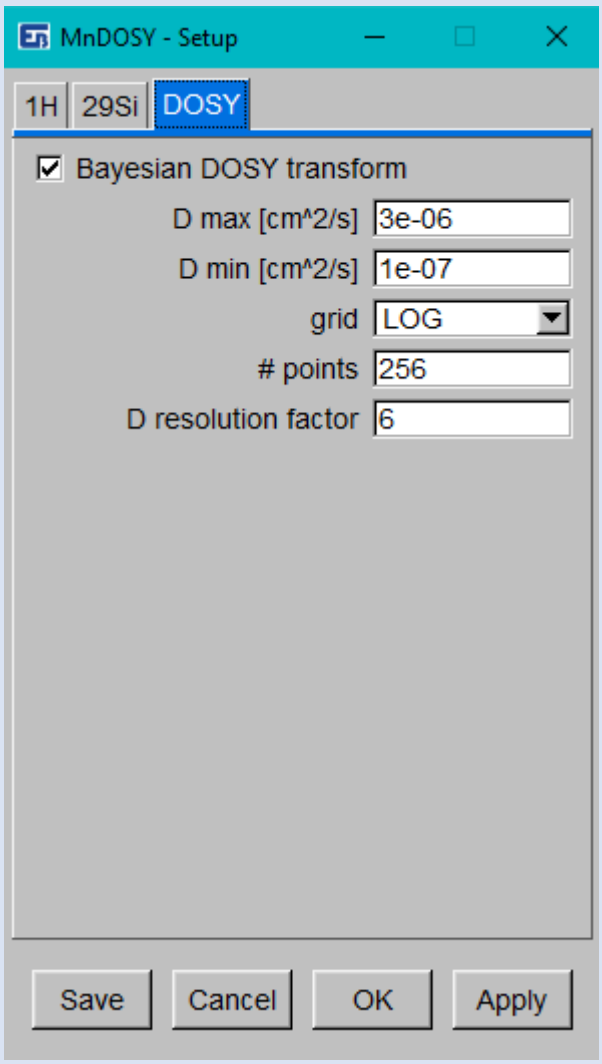
I. The 1H DOSY spectra

Loading the raw data
Principle menu commands
Setup dialog and its philosophy





The DOSY transform settings …

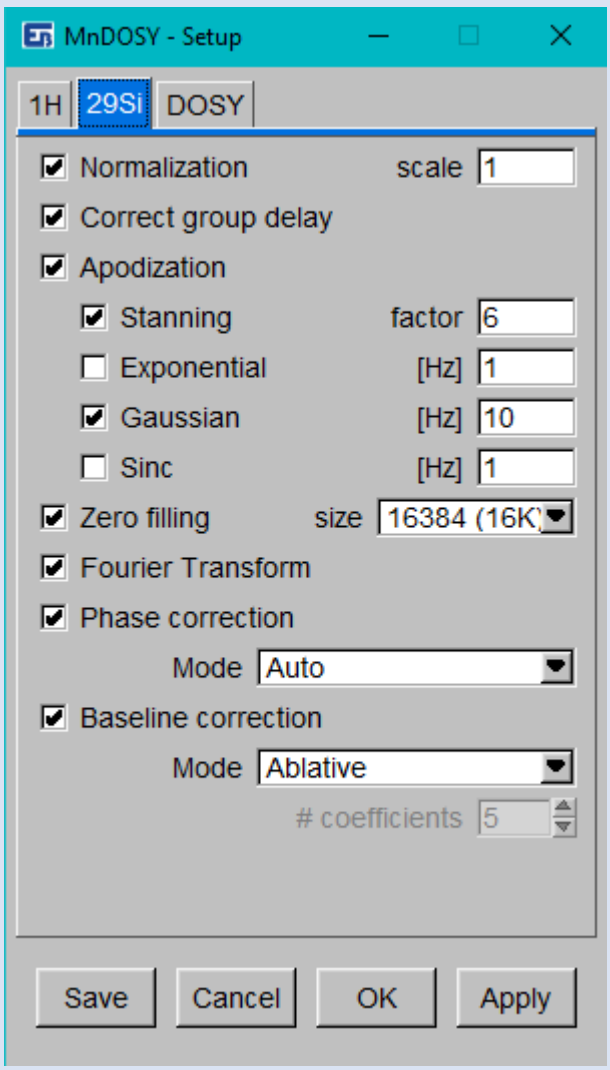


… and the execution command

Manipulations of the DOSY spectrum

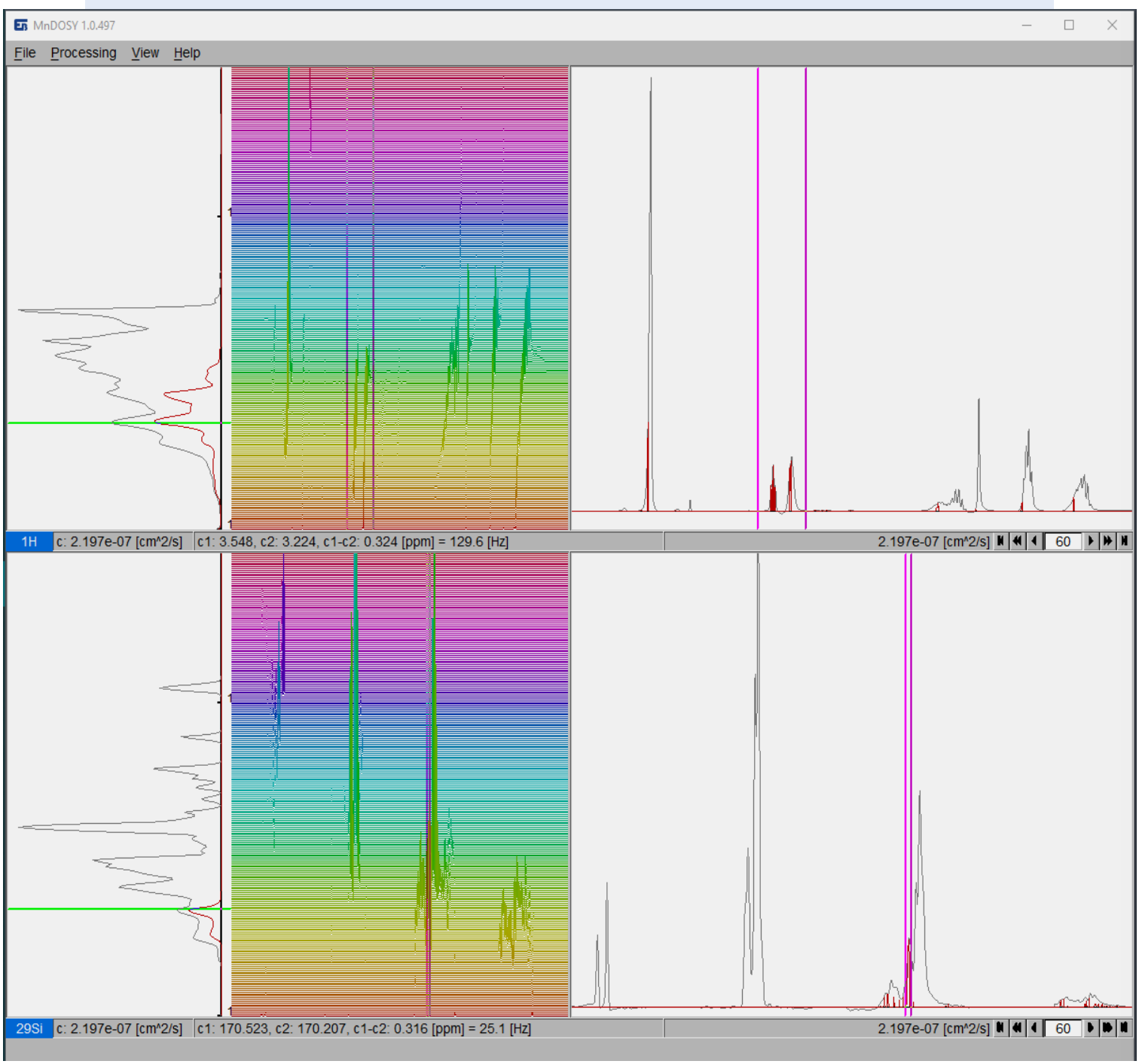
II. The 29Si DOSY spectra

The same steps
but pre-processing parameters may be different



III. 1H - 29Si MnDOSY

Load both data sets
and, Since all parameters are already set,
issue the command **Run all**



DOWNLOAD MnDOSY Windows installer from
www.extrabyte.eu/products/mndosy.html

More **Extra Byte** software Utilities:

* DontSmile (free):

Removes the annoying 'smileys/brownies' artefacts from Bruker data. Just correct the 'fid' or 'ser' files and then process them as you like; the smileys will be gone!

* REX:

A unique, comprehensive NMR relaxometry package! Covers everything from FID and CPMG analysis, Relaxation Curves analysis, NMRD and VT profiles analysis, and much more. Novel Inverse Laplace Transform (ILT) algorithms.

* TotalXMR:

Elementary analysis by NMR. Full support for quantification of any NMR-active nuclide by means of either high-field or low-field NMR.

Notes:

> **We adapt to data from any vendor and/or tinkerer.**
Just give us a few sample files.

> **Do you need a STEM software utility that does not exist yet? Or do you have a cute idea but need a software to try it out?**
Then get in touch with us. Remember: we do not *steal* ideas, we *support* them (confidentially, if need be).