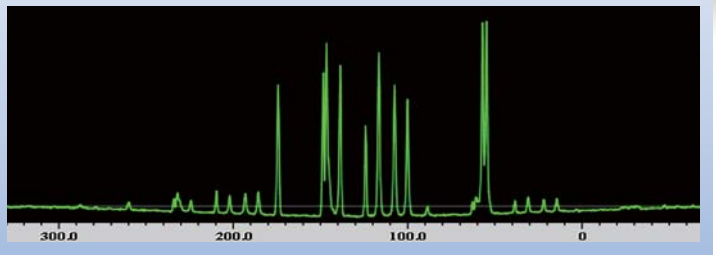
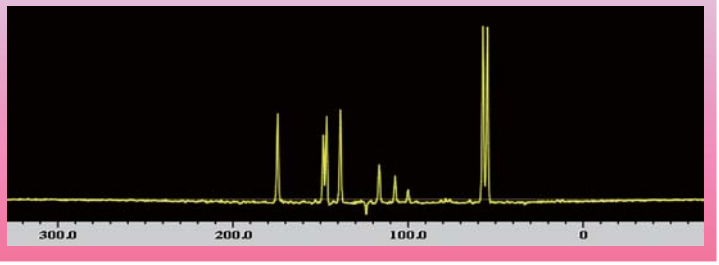
# From TOSS to PASS

In solid-state NMR, techniques for removing spinning sidebands are necessary in the case of large chemical-shift anisotropies and strong magnetic fields. This Note introduces PASS method, alternative to well-known TOSS.

$^{13}C$ CPMAS spectrum observed at 21.8 T yileds many spinning sidebands even at the spinning frequency of 20 kHz.
* Dr. T. Shimizu of NIMS is greatly acknowledged for his cooperation.

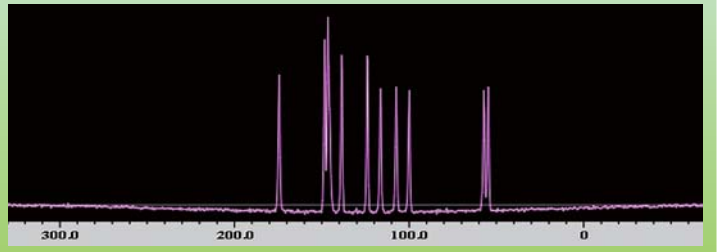



TOSS may sometimes give negative or less intense peaks, because the method disturbs centerbands when it suppresses spinning sidebands.




PASS may solve this problem.

The method sums up all the spinning sidebands, yielding spectra substantially the same as that observed at an infinite spinning frequency.




PASS separates sidebands in a two-dimensional way and sums them up after shearing transformation. All these processes are programmed to be excecuted automatically.





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