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## Supplementary Information for

## Temperature dependent poly(L-lactide) crystallization investigated by

## Fourier transform terahertz spectroscopy

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## S1 – Comment on Difference between Two Spectrometers

The main difference between conventional systems and ours (FARIS-S) is the piece number of half-mirrors contributing to the interference. In the conventional system (Fig. S1(a)), the half power of incident THz-wave passes through a horizontal polarizer, where the reflected power goes away from the entrance. The polarized THz-wave is split by only one half-mirror (beam splitter, 45° rotated) and goes to fixed and moving mirrors respectively. The reflected THz-wave with different phase meets again at the same half-mirror, then the output power is measured by a detector.

On the other hand, our system has two half-mirrors (Fig. S1(b)). In this system, incident THz-wave is divided into two directions by the FIRST half-mirror, and both routes contribute to the interference by the SECOND half-mirror. This is the reason why our system enables a signal that is double as strong as that obtained using the conventional systems.



Fig. S1 Difference between Two Spectrometers. (a) Conventional systems. (b) Our system (FARIS-S).