

RIKEN Database of THz spectra goes live

An online database containing terahertz spectroscopic data for nearly 200 materials has now gone live and is free to access. Compiled by researchers at RIKEN, a Japanese research organization, the terahertz database provides downloadable data in ascii and pdf format for research and educational purposes. The database is located at www.riken.jp/THzdatabase.

At present, it features 164 organic materials, including amino acids, saccharides, polymers, agrichemicals and medical compounds, as well as 18 inorganic materials, such as semiconductors and dielectrics. Several of the materials are widely used in the photonics community, for example silicon, sapphire, carbon nanotubes and lithium niobate. In each case transmission spectra (typically between 30 cm^{-1} and 200 cm^{-1}) and the measurement conditions, such as sample thickness, temperature and concentration, are provided. RIKEN says that it plans to grow the database and welcomes external parties to upload information they have collected themselves. "We believe that it is very important to collect this information and share it with the terahertz community and materials scientists," explained Hiromasa Ito, leader of the Teraphotonics research team at RIKEN. "We will routinely be adding more data ourselves and will be accepting data from others as well."