

Report on a Major Update of the Network Database System for Thermophysical Properties Data Developed by AIST

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The National Institute of Advanced Industrial Science and Technology, Japan (AIST) has been developing a network database system for thermophysical property data (TPDB) since 1980's. This database will store thermophysical property data such as thermal conductivity, specific heat capacity, thermal expansion coefficient, surface tension, viscosity and density etc. for variety of materials including solids, high temperature melts and fluids. A user friendly graphical user interface has been developed to register and access thermophysical property data via internet efficiently. This database uses hierarchy structure for material classification to which thermophysical property data is assigned. Scope and overall coverage of the database can be viewed by an explorer like user interface. The target material can be searched following the hierarchy structure from higher class to lower class. It is opened to public on the web site (<http://riodb.ibase.aist.go.jp/TPDB/DBGVsupport/English>). Here, we report recent improvement of the database to store image data such as SEM and TEM images and propose a challenge to a new type of research that uses the large amount of data of correlation between thermophysical properties and image data.