

Non-linear least squares fit of specific heat data within Schotte-Schotte model using web page

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Specific heat of rare-earth based materials at low temperatures can often be described by Schotte-Schotte model for Kondo impurity [1]. Since several decades thousands of papers were published which were devoted to physics of rare-earth based compounds and often presented specific heat measurements for Kondo systems. Schotte-Schotte model for Kondo impurity in a magnetic field requires evaluation of trigamma function for complex argument values. Typical graphing software for general use does not provide such capability. Therefore, very few papers related to Kondo effect in rare-earth based compounds provided analysis within that model. In this report we present a web page which fits specific heat data with a sum of electronic, lattice and Schotte-Schotte terms. The interface is written in Javascript, whereas back-end fitting engine is written in C and compiled to Javascript asm.js code using Emscripten compiler.

References:

[1] K. D. Schotte, U. Schotte, Phys. Lett. 55 (1975) 38–40