CermitESR_frfLoop(B0, B1, cantilever, f_rf_loop, grid, h, magnet, mw_x_0p, sample)
returns: df_spin
collection: CermitESR
graph: CermitESR_graph
handler: MemHandler
components:
- magnet: ['Bz_method', 'Bzx_method', 'Bzxx_method']
- sample: ['J', 'Gamma', 'spin_density', 'temperature', 'dB_sat', 'dB_hom']
- grid: ['grid_array', ['grid_shape', 'shape'], ['grid_step', 'step'], [...]
- cantilever: ['k2f_modulated']

CERMIT ESR experiment for a large tip.

grid extended

extend_grid(extend_grid_by_length, mw_x_0p)
return: ext_grid
functype: function

ext_grid

Bz extended

field_func(Bz_method, ext_grid, h)
return: ext_Bz
functype: function

Calculate the field value at the given height and grid points.

ext_Bz

B_tot extended

add(ext_Bz, B0)
return: ext_B_tot
functype: builtin_function_or_method

Calculate combined magnetic field.

ext_B_tot

B_tot sliced

slice_matrix(ext_B_tot, grid_shape)
return: B_tot
functype: function

Slice numpy matrix.

B_tot

ext_B_tot

mz_eq

mz_eq(B_tot, Gamma, J, temperature)
return: mz_eq
functype: numba.core.registry.CPUDispatcher

Magnetization per spin at the thermal equilibrium using the Brillouin function.

x_0p window pts

convert_grid_pts(mw_x_0p, grid_step)
return: ext_pts
functype: function

Convert distance to ext points.

Bzxx

field_func(Bzxx_method, grid_array, h)
return: Bzxx
functype: function

Calculate the field value at the given height and grid points.

mz_eq

ext_pts

Bzxx

subnode_f_rf

submodel_f_rf(B1, Bzxx, Gamma, dB_hom, dB_sat, ext_B_tot, ext_pts, f_rf_loop, grid_voxel, k2f_modulated, mz_eq, spin_density)
return: df_spin
functype: mrfmsim.model.Experiment
modifiers:
- loop_input('f_rf')

Submodel generated by loop_shortcut for parameter 'f_rf'.