Details of XRR/SymSphere

Calculates X-ray reflectivity from multilayers of core-shell spherical nanoparticles assembled near an interface  
 x : array of wave-vector transfer along z-direction  
 E : Energy of x-rays in inverse units of x  
 Rc : Radius of the core of the nanoparticles  
 rhoc : Electron density of the core  
 D : Separation between Nanoparticles  
 h1 : Distance between the center for the core and the interface  
 h1sig : width of the Fluctuations in h1  
 rhosh : Electron Density of the outer shell. If 0, the electron density the shell region will be assumed to be filled by the bulk phases depending upon the position of the nanoparticles  
 sig : Roughness of the interface  
 mpar : The monolayer parameters where, Layers: Layer description, d: thickness of each layer, rho:Electron density of each layer, beta: Absorption coefficient of each layer, sig: roughness of interface separating each layer. The upper and lower thickness should be always fixed. The roughness of the topmost layer should be always kept 0.  
 fix\_sig : 'True' for forcing all the rougnesses of all the layers in monolayers to be same and 'False' for not same  
 rrf : True or False for Frensnel normalized or not normalized reflectivity  
 qoff : q-offset to correct the zero q of the instrument  
 zmin : minimum depth for electron density calculation  
 zmax : maximum depth for electron density calculation  
 dz : minimum slab thickness  
 yscale : a scale factor for R or R/Rf  
 bkg : in-coherrent background  
 cov : coverage of nanoparticles  
 coherrent : True or False for coherrent or in-coherrent addition of reflectivities from nanoparticles and lipid layer