

March 7, 2023

Abstract

Notes

1 Hessian for $E(\theta_{ij}, \phi_{ij})$

$$E = -J1/2 \sum_{ij} \vec{S}_{i,j} \vec{S}_{i+1,j} + \vec{S}_{i,j} \vec{S}_{i,j+1} + J2/2 \sum_{ij} \vec{S}_{i,j} \vec{S}_{i+1,j+1} + J4/2 \sum_{ij} \vec{S}_{i,j} \vec{S}_{i+2,j} + \vec{S}_{i,j} \vec{S}_{i,j+2}$$

[illegible]

[illegible]

[illegible]

2