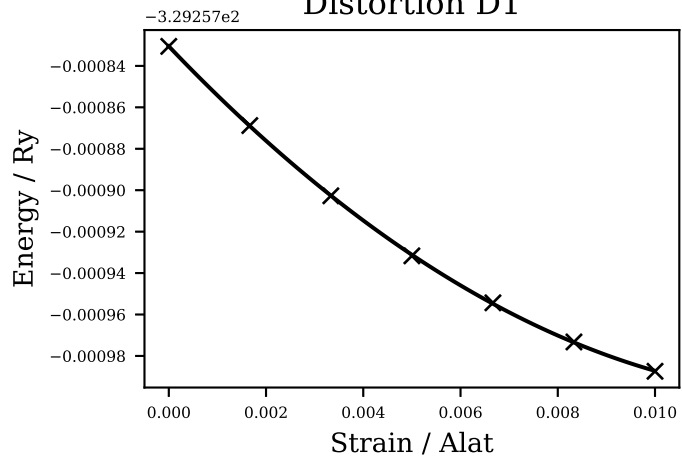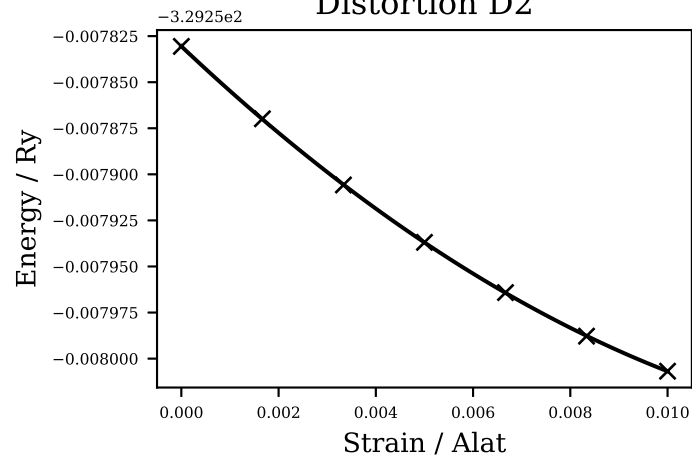Elastic Constant Curve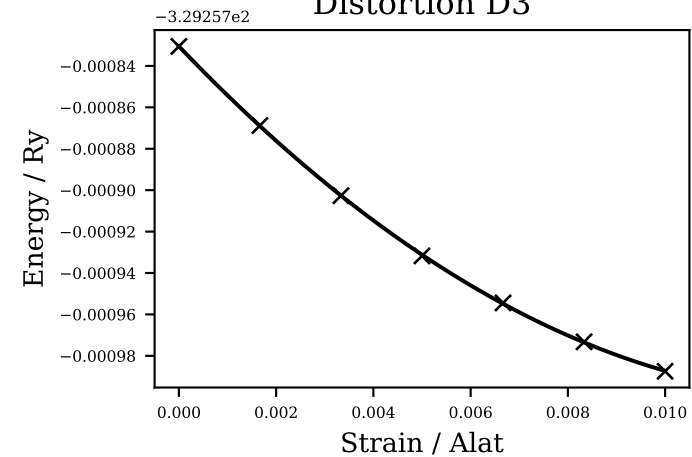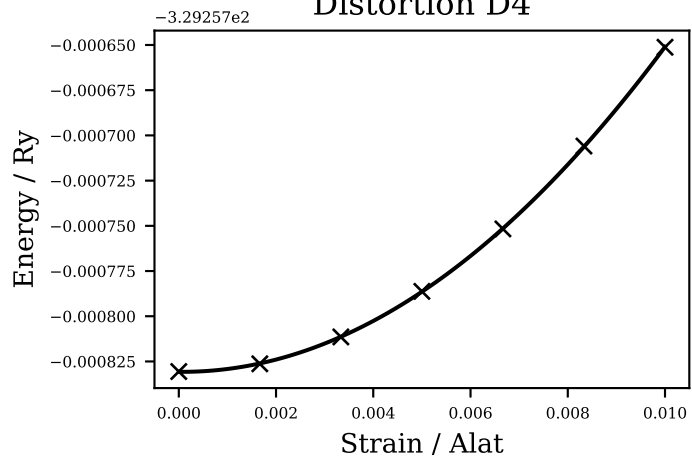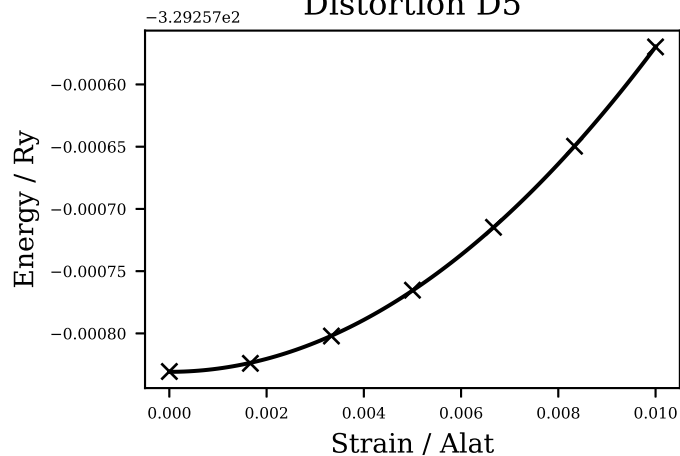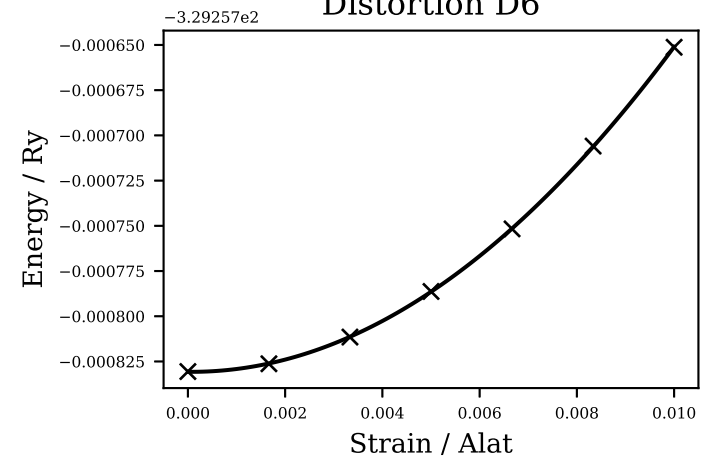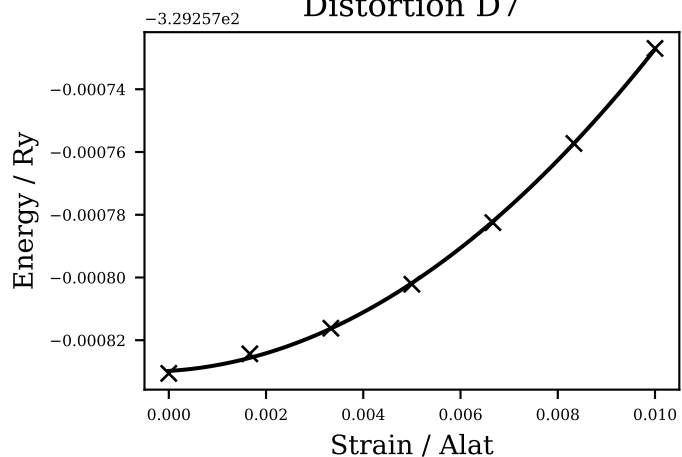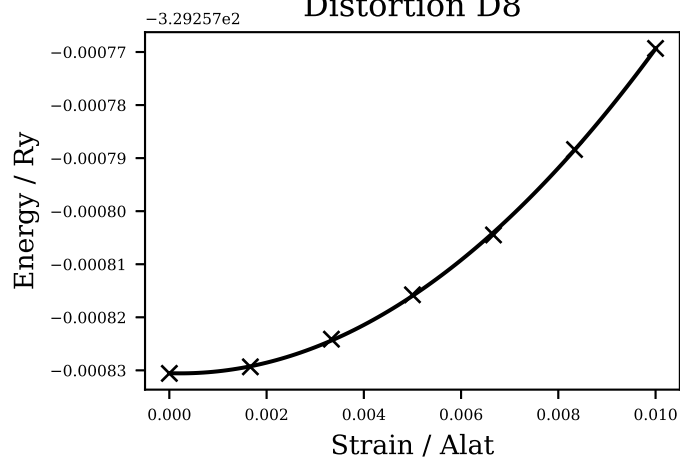s