

Abstract

The present invention provides a method that improves the accuracy of predicting material properties by making effective use of past data. A system to carry out prediction of material properties by processing task data including a plurality of records, each including a material composition, an experimental condition, and a material property is disclosed. This system includes a material property prediction presenting unit, a cross-task compatible feature value generating unit, and a material property predicting unit. The material property prediction presenting unit accepts a specification of first task data that includes a record in which a material property is unknown and is to be a target of material property prediction through a first predictive model. The cross-task compatible feature value generating unit predicts feature values from material compositions in the first task data by using a second predictive model. The material property predicting unit generates the first predictive model by using the material compositions, experimental condition, feature values, and the known material property in the first task data. Also, the material property predicting unit inputs the material composition, experimental condition, and feature value in a record in

which the material property is unknown in the first task data to the first predictive model and predicts the unknown material property.

Fig.1