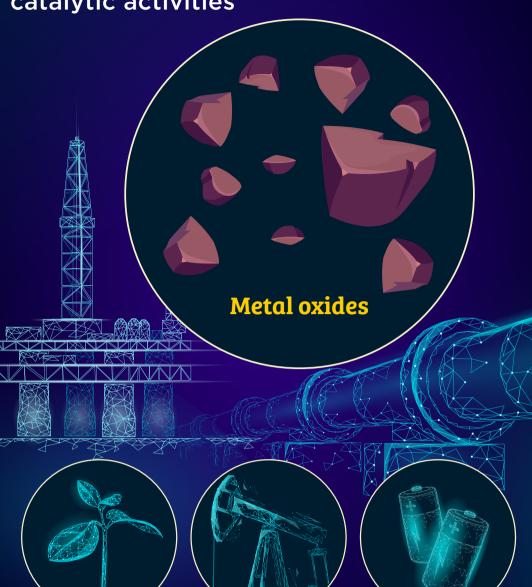
## Oxygen Vacancies: An **Easier Road to Predicting Metal Oxide** Catalysis

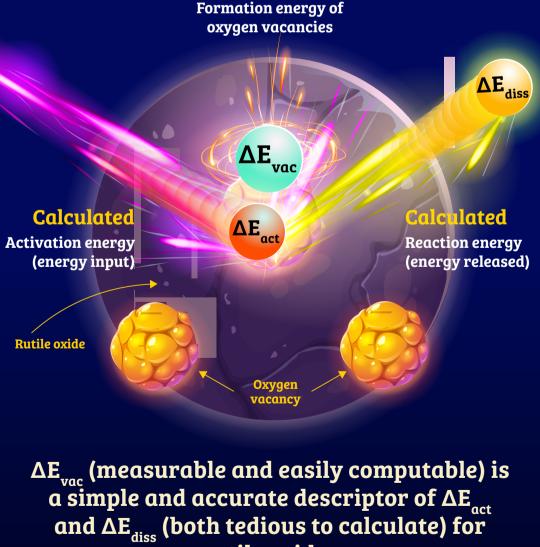
Metal oxide catalysts have numerous industrial applications, so it is important to understand the dynamics of their catalytic activities



However, the energy input required for catalysis on their surfaces is tedious to calculate

simpler property of metal oxides? Measured

Can the energy input be estimated using a



rutile oxides By using  $\Delta E_{vac}$  to determine the

more complex  $\Delta E_{act}$ , rutile oxide catalyst designs can be enhanced for their more efficient industrial application

