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Spectroscopical Approach to the Mechanism of the Rebinder
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or Dimethylsulfoxide*

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Abstract

The mechanism of the Rebinder effects is proposed from a point of view of the formation of barrier against the dislocation movement caused by strong chemisorption. The infrared and electronic spectra of N,N-dimethylformamide or dimethylsulfoxide adsorbed on MgO indicate that the adsorption may be accompanied by a charge transfer from these compounds to MgO. The proposed mechanism can explain the difference of the near-surface dislocation mobility in MgO immersed in N,N-dimethylformamide or dimethylsulfoxide.

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