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Title:	Enhanced Role of Transition Metal Ion Catalysis During In-Cloud Oxidation of SO ₂
Authors:	Sinha, B. (/jspui/browse?type=author&value=Sinha%2C+B.)
Keywords:	Global sulfate Oxidation Clouds
Issue Date:	2013
Publisher:	American Association for the Advancement of Science.
Citation:	Science, 340(6133), pp.727-730.
Abstract:	Global sulfate production plays a key role in aerosol radiative forcing; more than half of this production occurs in clouds. We found that sulfur dioxide oxidation catalyzed by natural transition metal ions is the dominant in-cloud oxidation pathway. The pathway was observed to occur primarily on coarse mineral dust, so the sulfate produced will have a short lifetime and little direct or indirect climatic effect. Taking this into account will lead to large changes in estimates of the magnitude and spatial distribution of aerosol forcing. Therefore, this oxidation pathway—which is currently included in only one of the 12 major global climate models—will have a significant impact on assessments of current and future climate.
Description:	Only IISERM authors are available in the record.
URI:	https://science.sciencemag.org/content/340/6133/727 (https://science.sciencemag.org/content/340/6133/727) http://hdl.handle.net/123456789/3039 (http://hdl.handle.net/123456789/3039)
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