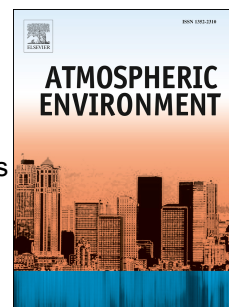


Accepted Manuscript

Secondary formation of oxalic acid and related organic species from biogenic sources in a larch forest at the northern slope of Mt. Fuji

Tomoki Mochizuki, Kimitaka Kawamura, Yuzo Miyazaki, Ryuichi Wada, Yoshiyuki Takahashi, Nobuko Saigusa, Akira Tani



PII: S1352-2310(17)30469-7

DOI: [10.1016/j.atmosenv.2017.07.028](https://doi.org/10.1016/j.atmosenv.2017.07.028)

Reference: AEA 15442

To appear in: *Atmospheric Environment*

Received Date: 24 January 2017

Revised Date: 13 July 2017

Accepted Date: 16 July 2017

Please cite this article as: Mochizuki, T., Kawamura, K., Miyazaki, Y., Wada, R., Takahashi, Y., Saigusa, N., Tani, A., Secondary formation of oxalic acid and related organic species from biogenic sources in a larch forest at the northern slope of Mt. Fuji, *Atmospheric Environment* (2017), doi: 10.1016/j.atmosenv.2017.07.028.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Revised to Atmospheric Environment

**Secondary formation of oxalic acid and related organic species from biogenic sources in
a larch forest at the northern slope of Mt. Fuji**

Tomoki Mochizuki^{1,4}, Kimitaka Kawamura^{*,1,5}, Yuzo Miyazaki¹, Ryuichi Wada², Yoshiyuki
Takahashi³, Nobuko Saigusa³, and Akira Tani⁴

¹Institute of Low Temperature Science, Hokkaido University, Sapporo 060-0819, Japan

²Department of Natural and Environmental Science, Teikyo University of Science, Uenohara
409-0193, Japan

³National Institute for Environmental Studies, Tsukuba 305-8506, Japan

⁴Graduate Division of Nutritional and Environmental Sciences, University of Shizuoka,
Shizuoka 422-8526, Japan

⁵Now at Chubu Institute for Advanced Studies, Chubu University, Kasugai 487-8501, Japan

*Correspondence to: K. Kawamura (kkawamura@isc.chubu.ac.jp)

Highlights:

We analyzed water-soluble organic aerosols from a larch forest

Oxalic acid was the dominant dicarboxylic acid species

Terpenes and unsaturated fatty acids are important precursors of dicarboxylic acids

Inflow of O₃ and other oxidants enhanced the formation of dicarboxylic acids

Keywords: Water-soluble organic aerosol, Oxalic acid, Unsaturated fatty acids, *Larix
kaempferi* forest, Terpenes, Ozone

Download English Version:

<https://daneshyari.com/en/article/5752849>

Download Persian Version:

<https://daneshyari.com/article/5752849>

[Daneshyari.com](https://daneshyari.com)