

Home

Online Library ACP

- ▣ Recent Final Revised Papers
- ▣ [Volumes and Issues](#)
- ▣ Special Issues
- ▣ Library Search
- ▣ Title and Author Search

Online Library ACPD

Alerts & RSS Feeds

General Information

Submission

Review

Production

Subscription

Comment on a Paper

Impact
Factor
4.865

ISI
indexed

ARCHIVED IN



PORTICO

▣ [Volumes and Issues](#) ▣ [Contents of Issue 10](#) ▣ [Special Issue](#)

Atmos. Chem. Phys., 8, 2759-2762, 2008

www.atmos-chem-phys.net/8/2759/2008/

© Author(s) 2008. This work is distributed under the Creative Commons Attribution 3.0 License.

Utilising polyphenylene oxide for high exposure solar UVA dosimetry

D. J. Turnbull and P. W. Schouten

Faculty of Sciences, University of Southern Queensland, Toowoomba, 4350, Australia

Abstract. A personal UV dosimeter that can quantitatively assess high exposure solar UVA exposures has been developed. The chemical polyphenylene oxide has been previously reported on its ability to measure high UVB exposures. This current research has found that polyphenylene oxide, cast in thin film form, is responsive to both the UVA and UVB parts of the solar spectrum. Further to this, the UVB wavelengths were filtered out with the use of mylar. This combined system responded to the UVA wavelengths only and underwent a change in optical absorbance as a result of UVA exposure. Preliminary results indicate that this UVA dosimeter saturates steadily when exposed to sunlight and can measure exposures of more than 20 MJ/m² of solar UVA radiation with an uncertainty level of no more than ±5%.

▣ [Final Revised Paper](#) (PDF, 372 KB) ▣ [Discussion Paper](#) (ACPD)

Citation: Turnbull, D. J. and Schouten, P. W.: Utilising polyphenylene oxide for high exposure solar UVA dosimetry, Atmos. Chem. Phys., 8, 2759-2762, 2008. ▣ [Bibtex](#) ▣ [EndNote](#) ▣ [Reference Manager](#)

Search ACP

Library Search

Author Search

News

- ▣ [Sister Journals AMT & GMD](#)
- ▣ [Financial Support for Authors](#)
- ▣ [Journal Impact Factor](#)
- ▣ [Public Relations & Background Information](#)

Recent Papers

01 | ACP, 10 Nov 2008:
Organic composition of carbonaceous aerosols in an aged prescribed fire plume

02 | ACP, 10 Nov 2008:
Airborne in-situ measurements of vertical, seasonal and latitudinal distributions of carbon dioxide over Europe

03 | ACP, 06 Nov 2008:
Retrieval of stratospheric aerosol size information from OSIRIS limb scattered sunlight spectra