

3 pages

ABSTRACT: INSTRUCTIONS TO AUTHORS

An abstract (maximum 1 page) is required for each platform presentation or poster presentation. Submit the abstract for your presentation as soon as possible to env-abstract@AASci.org.

Abstract Format. Abstracts are to be prepared using standard PC-based MS Word software. Abstracts must be in English and cannot exceed one page. Use an 11-point serif font (e.g. Times New Roman) and leave 1-inch (2.5-cm) margins left, right, top, and bottom. Center the title (maximum 20 words, bold type) with title case at the top of the page. Leave a blank line before beginning the author list, which also is to be centered. If several authors are from one organization, save space and make the list easier to read by grouping authors so that the organization need be typed only once. After each author or group of authors, use parentheses to enclose their affiliation - employer (first level only - omit division, department, etc.), city, state/province (if applicable) and country. ***Bold and italicize the name of the presenting author.*** Leave a blank line after the authors and then begin the text, typing it single-spaced and justifying only the left margin. Leave one blank line between paragraphs; do not indent paragraphs. Abstracts should be written in a letter-only manner. Do not use sub-title, figure, table and any non-letter content. Remove citation list, special symbol, header and footer. Email address of the corresponding/presenting author is to be listed (see the example below).

Mailing address listed in the cover note *must be sufficient for international delivery.*

Please read an example of the abstracts and its cover note in the next pages. More information can be found at the conference web site <http://www.AASci.org/conference/env/2020/abstracts.html>.

(See next page)

COVER NOTE

A New Refutation of the Classical Concept of Time in Quantum Relativity. **Kurt Gödel**, Albert Einstein, and P. A. M. Dirac.

Complete Mailing Address:

Kurt Gödel PhD., Professor, Director (**Presenting author**)
Institute for Advanced Study
Princeton University,
123 Einstein Drive
Princeton, NJ 08540, USA
Phone: 609-734-8001
Fax: 609-924-8398
Kgoedel@ias.edu
Kurt.Goedel@gmail.com

Albert Einstein, PhD. Professor (Corresponding author)
Institute for Advanced Study
Princeton University,
123 Einstein Drive
Princeton, NJ 08540, USA
Phone: 609-734-8002
Fax: 609-924-8398
Aeinstein@ias.edu
Albert.Einstein@yahoo.com

P. A. M. Dirac, PhD., Postdoctoral Fellow
Dept of Applied Mathematics and Theoretical Physics
Centre for Mathematical Sciences
Cambridge University
456 Wilberforce Road
Cambridge CB3 0WA
London,
United Kingdom
Phone: +44 1223 765000
Fax: +44 1223 765900
Pdirac@damtp.cam.ac.uk
P.Dirac@hotmail.com

Presentation preference:

Platform (Oral) presentation at Session 01-13 or 01-16

(See next page)

ABSTRACT

A New Refutation of the Classical Concept of Time in Quantum Relativity

Albert Einstein and *Kurt Gödel** (Princeton University, Princeton, NJ, USA)
P. A. M. Dirac (Cambridge University, Cambridge, London, UK)

Coupled abiotic and biotic reactions were investigated for the mineralization of 2,4,6-trinitrotoluene, TNT. Modified Fenton reactions (with Fe(III) catalyst) were used as a chemical pretreatment of TNT prior to biological mineralization of the Fenton degradation products by unclassified activated sludge cultures. Using a hydrogen peroxide concentration of 0.9%, a Fe(III) concentration of 13 mM, and biomass added 12 hours after initiation of the abiotic reaction, the observed extent of mineralization with the coupled abiotic/biotic system, 81%, was approximately 7% greater than with the abiotic, Fenton system alone. Results of this study showed that, if properly optimized, the use of a coupled abiotic/biotic system may be a viable alternative for the treatment of waters and soils containing TNT.

*Email1: Kurt.goedel@pinceton.edu

*Email2: Kurt.Goedel@gmail.com