



Integration of European Simulation Chambers for Investigating Atmospheric Processes

WP3-N2 Activity: Central Database of Environmental Chamber Studies and Central Spectroscopic Databases

Activity Leader: CEAM FOUNDATION

WP3-N2: Central Database of Environmental Chamber Studies and Central Spectroscopic Databases


OBJECTIVES

1. Maintain, promote and improve the database on environmental chambers studies, created within the EUROCHAMP 1 project
2. Explore and develop specific products for communities such as modellers (i.e. issues related to metadata for modelling studies)
3. Incorporate new modules with reference databases of mass spectra database of derivatives from PFBHA, BSTFA, etc; IR spectra, and spectroscopy related software tools for UV-Vis and IR.


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EUROCHAMP Database Server

Introduction	 <p>Project Description</p> <p>EUROCHAMP is a research project funded within the EC 6th Framework Programme, Section "Support for research Infrastructures - Integrated Infrastructure Initiative".</p> <p>11 European Partners are the backbone of this project, a grid of environmental chambers designed for the scientific investigation of atmospheric transformation processes. A number of associated research groups worldwide contribute to the project providing expert knowledge in specific fields of atmospheric science.</p> <p>Database on Environmental Chamber Studies</p> <p>The search engine will provide access to the data recorded during the experimental runs performed in the environmental simulation chambers of the participating institutes. There is a huge difference in size, scientific scope, technical capabilities and research topics treated among the groups providing the analysed data. The main objective is to give easy access to the data records and associated calibration files, with simple but specific search criteria and an easy to manage download facility.</p>
Access Database GUEST	
Access Database USERS	
Access Database INSTITUTIONS	
Web Statistics	
Useful Links to Partners	<p>CEAM EUPHORE Lab. FZJ-ICG-II Homepage FZK AIDA Homepage PC University of Wuppertal UCC-CRAC Homepage JRC-IES Ispra CNRS-LCSR Orleans PSI-LAC Villigen University of Bayreuth Uni. Leeds Chemistry SP Technical Research Institute of Sweden CNRS-LISA Paris IFT Leipzig</p>

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TASKS

Task 1. Maintenance of the EUROCHAMP database (All partners)

➤ Experimental and modelled data introduction




Robustness and usability increase

Task 2. Revision and modification of the html template (CEAM)

➤ The standard html template will be reviewed and modified in order to comply with the “World Wide Web Consortium” (W3C) rules and make it standard and compatible to all navigators

Ozonolysis of methyl vinyl ketone (MVK)

Date: 2004_03_12 / Uploaded: 2006_04_28

Institute	Fundación CEAM	
Experiment Reference Number	2004_03_12_chE	
Experiment Type	Ozonolysis - room temperature	

Available Data Files

Data Category	Parameters	Description	Download File
Monitor Data	T, P, mbar H2O, JNO2, NO, NO2	Generic Instruments	Monitor data file
Particles Data	Mass concentration	TEOM	Particles data file
Gas Chromatographic Data	VOCs	GC-FID/PID	Gas products data file
Gas Chromatographic Data	VOCs	GC-MS	Gas products data file
Gas Chromatographic Data	VOCs	GC-PAN	Gas products data file
Gas Chromatographic Data	VOCs	GC-TGA	Gas products data file
Packed file		All data files can be downloaded as zip file.	All data files zip

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TASKS

Task 3. Improvement of the central database (CEAM, CNRS-ICARE)

- New tools to make the database more interactive will be developed
- Automatic checks (reactants data introduction such as CAS number, SMILES, other names, etc)
- Links to other existing databases (e.g. kinetics, reactivity of oxygenated VOCs, pesticides)

Task 4. Incorporation of new modules (CEAM, PARIS12, UCC, CNRS-ICARE, BUW, etc.)

- Reference databases
 - Mass spectra derivatives from PFBHA, BSTFA, etc.
 - IR and UV-Vis spectra and absorption coefficients (links to/creation of common databases)
- User-friendly spectroscopic tools (graphic environment, change of resolution, etc) (JRA1-WP5.2)
- “Discussion forum” or “Ask the expert” web portal where researchers across the world could get advice on chamber design, experiment design, analytical instrumentation, etc.

Task 5. Exploration of ways to better facilitate data exchange (CEAM, LEEDS, UMAN, FZK, PSI, FZJ, IFT)

- Exploit the benefits the database offers to modellers



JRA2: WP6.1 and WP6.2



- Incorporation of modelled results and conclusions to the database
- Good tool to test and develop models
- Link experimentalists - model developers
- Facilitate the design of chamber experiments

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TASKS

Task 6. Security enhancement (*CEAM*)

- Type of access: Guest, User and Institution.

Security increase



Encryption of data specially in the communication channel during the exchange of credentials

Task 7. Development of a data use policy (*all partners*)

- Rules for the use of the data contained into the database will be further developed

Task 8. Open the database to data introduction by external Institutions (*all partners*)

- Within the EUROCHAMP-2 the database will be open to data introduction by external institutions around the world (USA, China, etc). Prior to that it is mandatory to define a protocol for the quality of the data.

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DELIVERABLES

- D 3.1 Data introduction by project partners. Outline reports on annual basis (12,24,36,48)
- D 3.2 Definition of a protocol for the quality of the data (also in N1-activity) (18)
- D 3.3 Development of a data use policy (12)
- D 3.4 Html template modification (12)
- D 3.5 Mass spectra database of derivatives from PFBHA, BSTFA, etc (12)
- D 3.6 FTIR reference spectra database. (12)
- D 3.7 Implementation of the mass spectral database of derivatives and FTIR spectra databases on the WWW. Links to other spectroscopic database sites (UV-Vis and IR) (13)
- D 3.8 Spectroscopic software tools (UV-Vis and IR) (14, 48)
- D 3.9 Reference spectra addition to databases. Reports on annual basis (24, 36, 48)
- D 3.10 Reports on the use of database for facilitating data exchange for modellers. Interface demonstration/testing (24, 36, 48)
- D 3.11 Data introduction open access by external institutions (18)
- D 3.12 Links to other interesting databases, e.g. kinetic, pesticides etc. (3)
- D 3.13 "Discussion forum" or "Ask the expert" web portal (6)

MILESTONES

- M 3.1 Assessment of the external use of the database (M22)
- M 3.2 Evaluation of the critical usability of the database (M30)

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