

## IUPAC Project Progress Report

**Date:** July 2007

**Task Group Leader:** Alex De Visscher

**Project number:** 2002-031-1-500

**Project Title:** Solubility data of compounds relevant to mobility of metals in the environment. Alkaline earth metal carbonates

### Report:

1. Current status of project: Project is nearing completion. Compilations are in the process of being revised to accommodate the current guidelines of the Solubility Data Series. A literature search for more recent data than currently compiled was done and the data are being compiled. Preliminary evaluation was completed but this requires revision.

2. Progress relative to 'milestones': some delay

3. Difficulties encountered (or concerns): Due to unexpectedly high teaching load the project had to be suspended for 4 months. This has been resolved with a Killam Fellowship for teaching relief kindly provided by the University of Calgary. This fellowship will be in effect during winter 2008.

4. Projected completion date (documents ready for external review): Spring 2008

5. Please list all of the intended outputs and the dissemination plan for this project (viz. articles, CD, conference presentations; etc.). These may have been expanded since project approval:

(i) already accomplished;

De Visscher A. & Vanderdeelen J. Estimation of the solubility constant of calcite, aragonite and vaterite at 25°C based on primary data using the Pitzer ion interaction approach. *Monatsh. Chem.* **134**, 769–775 (2003).

De Visscher A. & Vanderdeelen J. Consistency issues of aqueous solubility data and solution thermodynamics of electrolytes. *Pure Appl. Chem.* **77**, 619–629 (2005).

Aveiro, Portugal, 26–29 July 2004, 11<sup>th</sup> International Symposium on Solubility Phenomena, Oral presentation: De Visscher A. & Vanderdeelen J., Consistency issues of solubility data and solution thermodynamics of electrolytes.

Freiberg, Germany, 24–29 July 2006, the 12<sup>th</sup> ISSP (International Symposium on Solubility Phenomena) (IUPAC), Oral presentation: De Visscher A. Critical evaluation of alkaline earth carbonate solubilities in water.

(ii) planned

A volume of the IUPAC-NIST Solubility Data Series is in preparation for publication in *J. Phys. Chem. Ref. Data*.

The collection of ancillary data for the evaluation might be publishable as separate review papers. The feasibility of such side projects will be evaluated.

6. If your project is within 6 months of completion, how do you plan to utilise any remaining budget for this project? No remaining funds.

7. Work on this project may have identified new problems, issues, challenges, emerging topics, opportunities for related projects, etc. Please indicate these here so that the Division can follow up on them: