Stellingen

belonging to the thesis

A Laboratory Route to Interstellar Ice

1. The study of the thermal behavior of molecules in solids is key in the quest to understand their formation mechanism.

   Chapters 2 & 3

2. Observations of more than one vibrational mode of a molecule are needed to trace its origin and characterize its ice environment.

   Chapters 2 & 3

3. The detection of interstellar CO_2 in a H_2O-dominated ice matrix is a strong indication of the formation of CO_2 in that same environment.

   Chapter 3

4. A quantitative analysis of UV-driven solid state processes is essential to determine the influence of UV-photons on interstellar ice chemistry.

   Chapter 6

5. Complex ice chemistry is not restricted to the environment of young high mass stars.

   Chapter 7

6. Erosion of dust particles is a prerequisite for the development of life.
7. After water on Mars, diamonds around Jupiter will be the next scientific gold-mine.
8. The perception of time cannot be captured in scientific units.
9. Safe transport and storage of energy using hydrogen is not easily reproduced by mankind.
10. Freedom of choice can be a mind-boggling problem.
11. It will require a very special vacuum cleaner to tidy up a hotel on the Moon.
12. Werken onder ultra hoog vacuüm condities is pompen of verzuipen.

Leiden, 29 June 2005
Fleur A. van Broekhuizen