

UV Photodesorption and photoconversion of interstellar ices: the laboratory perspective

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Propositions accompanying the thesis

UV Photodesorption and Photoconversion of Interstellar Ices – the laboratory perspective

- 1. In the case that similar setups provide different experimental values, such as for the photodesorption of H_2O and CH_3OH , the use of another setup based on a different measurement concept is very useful. (Chapters 3 and 5)
- 2. Experiments with an argon ice cap allow to separate and quantify the effects of UV photoconversion and photodesorption in interstellar ice analogues. (Chapters 3 and 5)
- 3. Acetonitrile mixed in a water ice is an important solid-state precursor of C-, N-, and O- bearing complex organic molecules, that have been or will be detected in the interstellar medium (Chapter 4).
- 4. The unexpectedly large O₂ abundances on comets 67P/Churyumov–Gerasimenko and 1P/Halley can be in part explained by direct photoconversion of water ice. (Chapter 6)
- 5. It would be motivating research to investigate whether one has to be motivated to perform interesting research.
- 6. Unpaid requests for peer review should not be paid any attention anymore.
- 7. Researchers are privileged.
- 8. With great sensitivity comes great responsibility.
- 9. A habit of a mindful morning high-five to the person in the mirror sets both up for success.
- 10. Although writing a speech for one's own funeral might seem dark, it lights one's way in life.
- 11. Moving around sparks your growth but at the same time, it cuts your roots away.
- 12. For mutual benefit, employers should provide their employees with an opportunity to complete a workout of the day (WOD).

Michał Bulak Leiden, December 9th 2021