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Dark ice chemistry in interstellar clouds

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Propositions accompanying this thesis

Dark Ice Chemistry in Interstellar Clouds

1. The realization of a carbon atom addition experiment in interstellar ice analogues offers a new tool to study complex organic molecule (COM) formation in interstellar clouds. [Chapter 2]
2. The unraveling of formation pathways of simple interstellar molecules can be highly complex. [Chapter 3]
3. The combination of experimental and theoretical data is needed to thoroughly and accurately explain the results from astronomical observations.
4. The lack of methanol ice detections in quiescent clouds and cores inhibits progress in understanding the link between COMs found in the ISM and COMs detected in disks. [Chapters 4 and 5]
5. Quiescent clouds and cores hold much potential to harvest the initial inventory of astrochemically *and* astrobiologically relevant species. [Chapters 6, 7 and 8]
6. Carbon monoxide, toxic to life on Earth, is a key precursor in the chemistry that has led to the building blocks of life.
7. A disorder/disability that hinders learning does not always prevent one from obtaining a higher education.
8. The US graduate school system could learn from the system in the Netherlands.
9. Diversity in the workplace is a prerequisite to promote a more open-minded, fair, and welcoming work environment.
10. Ironically, the best advice is usually the advice that one gives oneself.

Danna Qasim
Leiden, June 30 2020