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Title: The formation of complex organic molecules in dense clouds : sweet results from the laboratory

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Propositions accompanying the thesis

The formation of complex molecules in dense clouds:

Sweet results from the laboratory

1. Laboratory studies on interstellar ices show that in dark and cold dense clouds the molecular complexity may be beyond our imagination.
(Chapter 2-5)
2. Non-energetic ice processing holds as much as potential to form complex organic molecules in space as energetic ice processing.
(Chapter 2-4)
3. The impact of reactive desorption to offer a non-dissociative mechanism that explains how solid-state species are transferred into the gas phase in space may be limited.
(Chapter 6)
4. Surface reactions of H₂ with electronically excited surface molecules holds potential to increase the amount of hydrogenated species in space.
(Chapter 7)
5. Finding an unique route to prebiotic species is far from trivial (see back side).
6. Scientific literature searches should be a barrierless process for everyone, whether they are in or out of academia.
7. A fancy representation of a tough reaction scheme can be very illustrative.
8. Experimental work is just like cooking; the difference is that you do not need to eat it when it goes wrong.
9. The best way to earn someone's respect is to prove oneself.
10. Scientific job advertisements should not be restricted to selected nationalities.

Ko-Ju Chuang
Leiden, May 2018

Find your way to the prebiotic species.

(A sketch of my experimental setup, I drew in the first year of my Ph.D. program)

