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Leiden  
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## **Molecular inheritance from cloud to disk: a story of complex organics and accretion shocks**

Gelder, M.L. van

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Propositions  
accompanying the thesis

Molecular inheritance  
from cloud to disk  
- A story of complex organics and accretion shocks -

1. Similar abundance ratios of complex organic molecules as observed in hot cores imply similar formation conditions in the cold prestellar cores. (*Chapter 2*)
2. Absence of emission from complex organics does not mean absence of complex organics in the protostellar system. (*Chapter 3*)
3. Deuteration of molecules forming predominantly on the surfaces of dust grains is directly related to the physical conditions in the prestellar phases. (*Chapter 4*)
4. Sulfur-bearing molecules such as SO and SO<sub>2</sub> can be accurate tracers of accretion shocks when a UV field is present. (*Chapters 5 & 6*)
5. Science should be about the quality of the results, not the quantity of publications.
6. Guaranteed observations do not mean guaranteed data.
7. Explaining science at a basic level to the general public also teaches scientists themselves.
8. The importance of long breaks and holidays on ones mental well-being should not be underestimated.
9. Good insulation of houses shifts the energy problem from winter to summer.
10. Green-bottled beer brewed in Enschede is, and always will be, the best pilsener.
11. Seeing humour in everything makes one a lot happier.

Martijn van Gelder  
Leiden, 24 November 2022