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Opponent Review for the Bachelor Thesis:

"Characterisation of Polydimethyl Siloxane (PDMS) by liquid-state NMR spectroscopy"

The Bachelor Thesis of Solmaz Haddady Khelejan entitled "Characterisation of Polydimethyl Siloxane (PDMS) by liquid-state NMR spectroscopy" investigates the relationship between the polymer properties on a molecular level by 1D and 2D NMR spectroscopy.The underlying work analyzes how two liquid/viscose base materials (Base and Curing Agent by Ecoflex ®), after putting together and polymerization, will produce silicones.

Solmaz Haddady Khelejan wants to show how vinyl groups are consumed and how methyl attached groups increase during this polymerization process. The work is divided in eight chapters (chapter 1: Introduction; chapter 2: Basic informations about polydimethylsiloxane (PDMS); chapter 3: Introduction about Nuclear Magnetic Resonance (NMR)); chapter 4: Provides some basic information in machine learning methods; chapter 5 provides experimental data, introduce experimental sources (chapter 5.1), experimental method (chapter 5.2), and experimental results are shown in chapters 6 and 7. A short maybe too short conclusion and discussion is provided in chapter 8. More efforts could have been made to the discuss the data in more detail.

The overall presentation of this thesis is clear and easy to follow. The introduction clearly lays out the main goals of the work. The background work in both fields (experimental and data analysis) is covered well. While reading the thesis one can observe that Solmaz Haddady Khelejan has a good understanding of the methods she used in this work.
Experiments are well defined and performed and the discussions and conclusions are insightful.

All in all, I can confidently state that this thesis meets my criteria for a good bachelor thesis and I am pleased to recommend it for acceptance with a good degree.

Yours sincerely,

Wolfgang Schöfberger