

1. PVC/Clay Nanocomposites: X-ray Diffraction, Thermal and Rheological Behaviour
2. PVC-Paste/Clay Nanocomposites: Investigation of Thermal and Morphological Characteristics
3. Positive Detoriation of Thermal Stability of Nanofilled Polypropylene
4. PP/Clay Nanocomposites: Structural Characteristics Influenced by Flow

Already from the title of the papers it becomes clear, that the main part of the thesis is divided in two parts, triggered by the different matrix materials that require for example different processing routes. Each individual paper is already reviewed and the fact, that the papers are published or accepted for publication in noted journals like *Polymer Degradation and Stability*, *International Journal of Polymer Analysis and Characterization* and *Journal of Nanostructured Polymers and Nanocomposites* shows the high scientific standard of the papers. All papers are team works and Ing. Peprniček estimates his part of about 50 %. This is not unusual and the share of Ing. Peprniček is adequate.

Looking at the complete thesis, no objectives and no summary are given. This fact makes it more difficult to asses the thesis in its entirety. A complete frame around the four papers, including the state of the art that is already given in Chapter 2 as well as the objectives and conclusions that are missing, would be very welcome. Acquire the links or differences (i.e. the formulation of conclusions) between the investigated materials states and resulting properties would be the next step in the quality of scientific work.

Formal standards are fulfilled, but not on a very high quality level due to the differences in the presentation of the papers, some very small figures and some spelling mistakes.

### 3. Appraisal

The reached results demonstrate regarding their expressiveness related to the correlation processing – structure formation – properties a clear increase in knowledge. Ing. Peprniček has been proved his qualification for independent scientific comprehension of theoretical results and their further development. With that, all requirements on a doctorate are fulfilled.

recommend the thesis for presentation.



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