surrounding atmosphere, mechanical influences etc. Such Structural layers have therefore hitherto been encapsulated as far as possible. The encapsulation permits the most optimum separation from the surrounding atmosphere, from dirt, liquids and gases.

The production of a protective layer represents a further possibility for the protection of a structural layer. The direct coating of structural layers by a protective layer material has until now been faced with many problems. There are numerous methods in the prior art for the production and therefore coating and/or curing of protective layers, which however have to be carried out at relatively high temperatures. Such high temperatures can however destroy a structural layer lying beneath the protective layer, in particular if it consists of a structural layer material with a relatively low decomposition temperature.

Other processes are known in the prior art, in particular spin coating processes, which endeavour to circumvent such problems. With the aid of spin coating processes, protective layer materials, from the sol-gel material class, are deposited on the structural layers. In further process steps, however, the structural layer materials have to be cured, in particular at relatively high temperatures. The following curing processes must therefore still take place at relatively high temperatures, even if the coating has been carried out at low temperatures.

Embodiments of the present invention overcome the drawbacks of the prior art and in particular to specify an improved method for the formation of a protective layer.

All combinations of at least two features stated in the description, in the claims and/or the drawings also fall within the scope of the invention. In stated value ranges, values lying within the stated limits should also be

deemed to be disclosed as limiting values and can be claimed in any combination.

According to an aspect of the invention, there is provided a method for the application of a protective layer material on a structural layer for the formation of a protective layer, preferably an oxide layer, more preferably a silicon dioxide layer, on the structural layer, wherein the application of the protective layer material takes place at a temperature less than 200°C, preferably less than 100°C, still more preferably less than 75°C, most preferably less than 50°C, with utmost preference at room temperature, wherein the structural layer is imprinted.

Provision is preferably made such that the application of the protective layer material takes place with a sol-gel process.

Provision is also preferably made such that the protective layer material is cured, preferably at room temperature, with an ammonia gas for the formation of the protective layer after the application on the structural layer.

Provision is also preferably made such that the preferably liquid protective layer material is converted into the protective layer, wherein the protective layer is glass-like.

Provision is also preferably made such that the structural layer comprises structures, wherein the structures are constituted as optical systems.

The invention thus relates to a method for the protection of a structural layer by means of a protective layer. The structural layer is coated with a protective layer material. The application preferably takes place with a sol-gel process or the coating process is preferably a sol-gel process.