



4. COIN-Ausschreibung „Kooperation und Netzwerke“

Projekt:

Min4k - Innovative functional minerals for the plastics industry

FörderungsnehmerIn:

Montanuniversität Leoben

Kurzfassung

The development of new applications for plastics in recent years caused an increased demand for specific raw materials. These materials (“compounds”) are based on a few base polymers and a wide variety of fillers, mainly high tech mineral fillers, usually mentioned as “Functional Minerals”. These fillers are based on a variety of industrial minerals. Innovations in the plastics industry in recent years clearly show a development from fillers as “extended fillers” to “Functional Minerals”. These Functional Minerals are characterised by (1) advanced technical performance, (2) additional functions, (3) a consistent product quality and availability. Advanced mining techniques provide selective excavation of the raw material and go hand in hand with innovative processing techniques, specific to the application and the mined deposit. These innovative processing techniques (e.g. ultra fine milling) are in fast-paced development and possible with a variety of minerals. The production of Functional Minerals with a consistent product quality is only possible with a reliable supply-chain. As mentioned in the raw material initiative of the EU (2008), the supply with raw materials is essential for growth and jobs in Europe. This is especially important for raw materials mentioned on the list of critical raw materials by the EU-raw material supply group (July 2010).

Due to the increased demand of high tech Functional Minerals some companies have taken up this opportunity and provide the plastics industry with innovative Functional Minerals.

These companies, in cooperation with the Montanuniversität now want to produce new, innovative Functional Minerals from new deposits. The first step of this project is to search for specific sources (mines) in the partner countries. This includes an intense material characterisation and small sized processing tests. The second step is based on mineral processing with innovative methods, the modification of certain Functional Minerals (e.g. Bentonite), the development of compounds and application tests in cooperation with Austrian processing and compounding companies. The last step will be to establish a platform for innovative Functional Minerals in Austria. With participation of an academically base supporting producer-costumer networks between mining companies and the Functional Mineral and plastics industry in Austria. This would be a win-win situation for all sides and bundle high-tech knowledge about Functional Minerals, compounds and their applications in Austria.