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Poster presentation

Personalised information spaces for chemical digital libraries
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Today's challenge for a chemist in information retrieval is no longer limited to the find-and-search process for the right resources in a digital library, but to that of finding the right piece of information within a plethora of returned search results. Integrated search portals on the Internet are able to simultaneously search in multiple and heterogeneous document collections containing millions of documents. Information providers like digital libraries are challenged by the information overload resulting in the availability of more and more information.

The ViFaChem II project run by the TIB Hannover and the L3S Research Center develops extended modules for the chemistry portal http://www.chem.de[1], which aim to assist chemists in their search for the right piece of information by creating metadata enriched document collections, which will allow specialised search and navigation through query results taking into account individual retrieval strategies, thus forming a personalised knowledge space of chemistry. For this the ViFaChem II project explores mining chemical document collections with methods like chemical entity recognition, recognition of reaction types or optical chemical structure recognition to build up metadata enriched document collections. A special focus lies in the generation of chemical structure information out of text document to make these document collections accessible for chemical structure search. Beside the classical approach to information retrieval ViFaChem II will also offer different access paths to information making use of the faceted browsing paradigm [2]. A semantic taxonomy generation algorithm, which dynamically creates personalised facets. Using the relationship between documents and author keywords this arranges relevant keywords in a hierarchical fashion. The information retrieval interface of ViFaChem II hence will provide the user with a new experience in searching large document collections. Combined with Web 2.0 features like social tagging, the use of ontologies, taxonomies, and facets enable the user to navigate through query results based on his personalised knowledge space.

References
1.   [http://www.chem.de].
2.   Diederich J, Balke W-T: **The Semantic GrowBag Algorithm: Automatically Deriving Categorization Systems, Research and Advanced Technology for Digital Libraries, 11th European Conference, ECDL 2007, Budapest, Hungary.** .