

# HelmholtzZentrum münchen

Deutsches Forschungszentrum für Gesundheit und Umwelt



## JOINT MASS SPECTROMETRY CENTRE







"Highly Sulfuric Oil Shale as a Source of Substances of Complex Chemical Composition – History, Current Uses and Outlook"

ICHTHYOL-GESELLSCHAFT
Cordes, Hermanni & Co. (GmbH & Co.) KG, Hamburg, Germany

**Dr. Guido Gayko** 

**Date:** 18<sup>th</sup> June 2019 (Tuesday)

**Time:** 05:30 p.m.

Venue: Research Building Department "Life, Light & Matter"

of the Interdisciplinary Faculty of the University of Rostock, seminar room 110, A.- Einstein-Str. 25, 18059 Rostock

# **Abstract**

Oil shale is a widespread sedimentary rock containing solid organic material in varying amounts. Current conservative estimates assume that about 6 trillion tons of shale oil could be extracted from oil shale, which exceeds the global reserves of crude oil many times over. Nevertheless, with regional exceptions, oil shale has hardly played a role as a source of raw materials or energy. One notable exception is the worldwide use of shale oil-based active ingredients in pharmaceutical products. For more than 100 years, sulfur-rich shale oil sulfonation products have been used in dermatology for the treatment of skin diseases. In the pharmacopoeias, the active ingredients are essentially defined by key figures due to their complex composition. The structural elucidation of shale oil fractions and their sulfonation products is a challenge for modern instrumental analysis.

## Short CV

Professional Experience

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10/1997-present	Research & Distribution of Sulfonated Shale Oils, ICHTHY	OL-
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GESELLSCHAFT and OSTERREICHISCHE ICHTHYOL, different responsibilities,

among others Head of Production, Deputy Head of QC, Head of QA

10/1996-09/1997 Scientific collaborator at VEBA OEL AG (now BP), department "development of petro-chemistry"

01/1993-02/1997 Ph.D. thesis entitled "A contribution to the mode of action of catalysts for the oxidative coupling of methane" in the group of Prof. Dr. Manfred Baerns,

Dept. of Technical Chemistry, University of Bochum, 02/1997 Ph.D. degree in natural sciences

University Education

10/1987-11/1992 First Degree in chemistry, University of Bochum Title of diploma thesis:

"On the Influence of Oxygen Anion Conductivity and Basicity of Metal Oxide Catalysts on the Selectivity of the Oxidative Coupling of Methane to Higher

Hydrocarbons"

#### \*\*\*All interested are welcome\*\*\*