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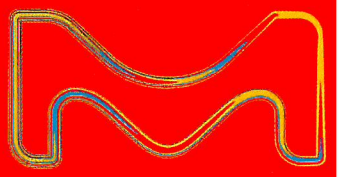

SEMINAR

Late-Stage Fluorination for PET Imaging

Date: Wednesday, November 2nd, 2016

Time: 10.00 - 11.00

Place: Room 021, Building 206 (ground floor, DTU Chemistry), Lyngby

Presented By: Professor **Tobias Ritter**, Max Planck Institute

Abstract

The unnatural isotope fluorine–18 (18F) is used as a positron emitter in molecular imaging. Currently, many potentially useful 18F-labeled probe molecules are inaccessible for imaging, because no fluorination chemistry is available to make them. Syntheses must be rapid on account of the 110-minute half-life of 18F and benefit from using [18F]fluoride due to practical access and suitable isotope enrichment. But [18F]fluoride chemistry has been limited in reaction and substrate scope. I will describe the development of novel, modern fluorination reactions and evaluate them based on their utility for F-18 and F-19 chemistry. Late-stage fluorination enables the synthesis of new drug candidates and conventionally unavailable positron emission tomography (PET) tracers for anticipated applications in pharmaceutical development as well as pre-clinical and clinical PET imaging.

Selected References:

- T. Furuyam, A. S. Kamlet T. Ritter, *Nature* **2011**, 473, 470-477
- E. Lee, A. S. Kamlet, D. C. Powers, C. N. Neumann, G. B. Boursalian, T. Furuya, D. C. Choi, J. M. Hooker, T. Ritter *Science* **2011**, 334, 639–642.
- C. N. Neumann, J. M. Hooker, T. Ritter *Nature* **2016**, 534, 369–373

For further questions, contact:

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