



## 山口大学応用分子生命科学常盤台コロキアム

### *Tokiwadai Colloquium in Yamaguchi University*

山口大学工学部（宇部市常盤台二丁目）

医学系研究科応用分子生命科学系（工学系）では、応用分子生命科学常盤台コロキアムを開いています。分子生命科学分野の第一人者の先生方の最先端の研究のお話を聞けるチャンスです。医学系をはじめとし山口大学のすべての大学院学生・学部学生・教職員の参加を歓迎します。また、近隣の研究機関、企業の方もどうぞお誘いあわせの上おいでください。入場無料です。

第40回 2013年4月17日（水）午後4時10分より

D22 講義室

**Professor Jim Anderson**

**Department of Chemistry, University College London**

**「The Synthesis of Chiral Amino Heterocycles and The use of CO<sub>2</sub> as a C-1 reagent」**

**The Synthesis of Chiral Amino Heterocycles**

The talk will summarise our development of the nitro Mannich reaction for the synthesis of 1,2-diamines. It will include a description of enantioselective variants which rely upon chiral Lewis acids, asymmetric conjugate addition to generate chiral nitronates and our most recent results using organocatalysed tandem reduction/nitro-Mannich reactions. Protocols for the reduction of the sensitive  $\alpha$ -nitroamines to prepare enantiomerically pure 1,2-diamines and the subsequent use of these fragments to make amino heterocycles through lactamisation and intramolecular Pd catalysed amination reactions will also be presented.

**The use of CO<sub>2</sub> as a C-1 reagent**

There is currently a search for alternatives to chemical feedstocks for the fine chemicals industry that do not rely upon oil. Carbon dioxide has emerged as a renewable candidate, however it is thermodynamically and kinetically very stable and its use as a general C-1 reagent poses significant problems. This research shows that carbon dioxide, at atmospheric pressure and ambient temperature, reacts with modified titanium imido complexes through heterocumulene metathesis reactions to form symmetrical ureas.

なお、この講義は医学系研究科博士後期課程の「最先端ライフサイエンス研究科目」認定の講演会です。博士課程の学生諸君は、受講簿を持参してください。多数のご来聴を歓迎します。

問い合わせ先：応用分子生命科学系専攻 上村明男（9231）

理工学研究科物質化学専攻 西形孝司（9261）

