JHH lab, Chemistry Department, NCUE

COME and LEARN

- **Synthesis of ruthenium compounds as catalysts for asymmetric transfer hydrogenation or as the drugs for cancer cell inhibition**
- **Lab facility: NMR, IR, X-ray, GC-MASS, etc.**
- **Requirements: hard-worker, responsible**

2018 SCI publications

1. Ya-Wen Tsai, Yun-Fan Chen, Yong-Jie Li, Kuan-Hung Chen, Chia-Her Lin, Jui-Hsien Huang. Structural Determination of Ruthenium Complexes Containing Bi-Dentate Pyrrole-Ketone Ligands. Molecules 2018, 23, 159
2. Kuan-Hung Chen, Tzung-Han Lin, Tzu-En Hsu, Yong-Jie Li, Guan-Hao Chen, Wohn-Jenn Leu, Jih-Hwa Guh, Chia-Her Lin, Jui-Hsien Huang. Ruthenium (II) complexes containing dehydroacetic acid and its imine derivative ligands. Synthesis, characterization and cancer cell growth anti-proliferation activity (GI50) study. J. Organomet. Chem. 2018, 871, 150-158.
3. Guan-Hao Chen, Wohn-Jenn Leu, Jih-Hwa Guh, Chia-Her Lin, Jui-Hsien Huang. Synthesis, characterization and cancer cell growth inhibition activity of ruthenium(II) complexes bearing bidentate pyrrole-imine ligands. J. Organomet. Chem. 2018, 868, 122-130.
4. Chi-Meng Hsiao, Yun-Fan Chen, Chia-Her Lin, Ching-Han Hu, You-Ru Cai, Jui-Hsien Huang. Catalytic amination of benzyl alcohol using ruthenium cymene compounds containing bidentate N,O-donor ancillary ligands. J. Organomet. Chem. 2018, 861, 10-16.

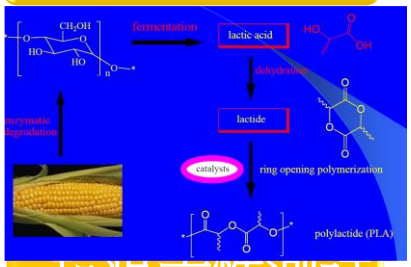
有機合成

- 有機合成技巧
- 使用資料庫
- 使用化學專用軟體

有機金屬合成

- 使用真空系統/手套箱
- 再結晶 技術/顯微鏡
- 使用化學專用軟體

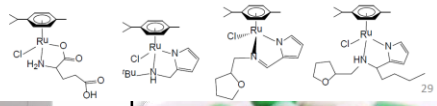
開環聚合催化



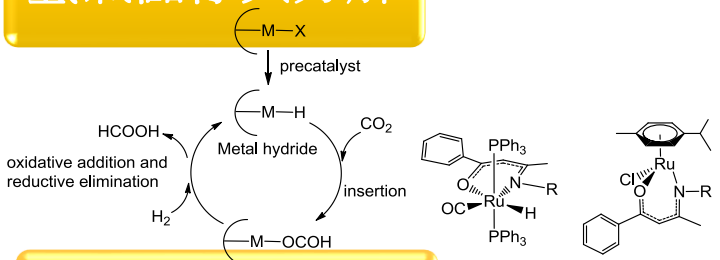
抗癌毒性測試

SRB assay results for PC-3 and DU145 cells (Dalton 2015, 44, 16107)

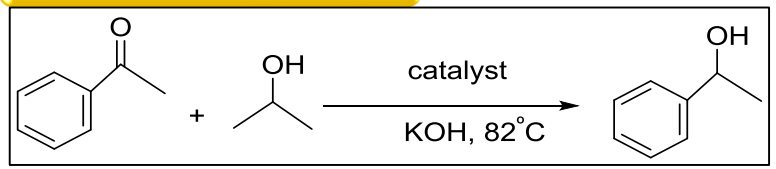
Compound	Molecular weight	SRB assay (GI_{50}, μM) N=3	
		PC-3 cells	DU145 cells
2	416.86	>100	>100
3	421.97	16.6±2.7	6.4±0.8
4	469.00	7.7±0.8	6.7±0.4
7	521.12	14.9±2.6	10.3±1.4
Cisplatin	300.05	27.0±6.1	22.8±5.1



氫氣儲存與分解



氫轉移催化應用



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