科目ナン	バリン	グ U-1	LAS13 200	0006 LE60								
授業科目 <英訳>	名 Introd	duction to	Chemistry B Chemistry B	B-E2 B-E2 担当者所属 工学研究科			斗 // 	准教授 Tong Zhu				
群	自然科:	学科目群	分野(分類)	化学(発	-(発展)				用言語	英語		
旧群	B群	単位数	2単位	週コマ数	1コマ		授業形態 講			義(対面授業科目)		
開講年度・ 開講期	2025 •	後期	曜時限火	(3		配当	当学年	主として1・	2回生	対象学:	生理系向	

#### [授業の概要・目的]

These lectures will introduce students to the fundamentals of inorganic chemistry. This series of lectures will aim at giving students a basic comprehension of chemical reactions (acid-base and redox) as well as the structure of inorganic substances, their properties and their applications in our daily lives. This course is designed for both Japanese and International students.

# [到達目標]

(1) To understand the theories of acid-base and redox reactions. (2) To be able to analyze the symmetry of complex molecules and their related properties. (3) To understand the fundamental theories and their applications.

## [授業計画と内容]

The course will cover the following topics, and each of them is read in 1 or 2 weeks

- (1) Brønsted acids and bases
- (2) Lewis acids and bases
- (3) Oxidation and reduction
- (4) Representation of potentials and applications
- (5) Molecular symmetry and coordination compounds
- (6) Electronic structure of d-metal complexes: crystal-field theory and ligand-field theory
- (7) Properties of d-metal complexes
- (8) Introduction to the characterization techniques in inorganic chemistry
- (9) Material chemistry
- (10) Catalysis

Total 14 classes and 1 Feedback

### [履修要件]

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### [成績評価の方法・観点]

Evaluation will be based on attendance and participation (10%), reports (90%).

### [教科書]

Weller, Overton, Rourke, Armstrong Inorganic Chemistry (Oxford University Press ) ISBN:978-0-19-964182-6

Introduction to Inorganic Chemistry B-E2(2)へ続く

[参考書等]  (参考書) 受業中に紹介する Will be announced during the lecture (関連URL) (Will be announced during the lecture) [授業外学修(予習・復習)等] Students are required to do their homeworks and when trouble is encountered during homework, please ask me.  [その他(オフィスアワー等)] Office hour: Anytime by email and appointments should be made via email. [主要授業科目(学部・学科名)]	
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