

# Career Opportunities of Nuclear Technology and Applications Division

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1/29/2024

# Introduction

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- **Our mission:** Nuclear Technology and Applications Division (NTAD) is an application-oriented, non-profit R&D affiliation of the IHEP, aiming at technology transfer and product industrialization
- **Our areas:** Medical imaging devices for pre-clinical research and diagnosis, irradiation accelerators, industrial CT, radiation safety monitoring, low-toxic tumor therapy nano-medicine, etc.



Beijing office



Jinan Laboratory

# Introduction

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## **Staff and graduate students: 105 in total**

- Full-time faculties: 58
- Post doctorate: 2
- Graduate students: 25
- Exchanged students: 16
- Others: 4

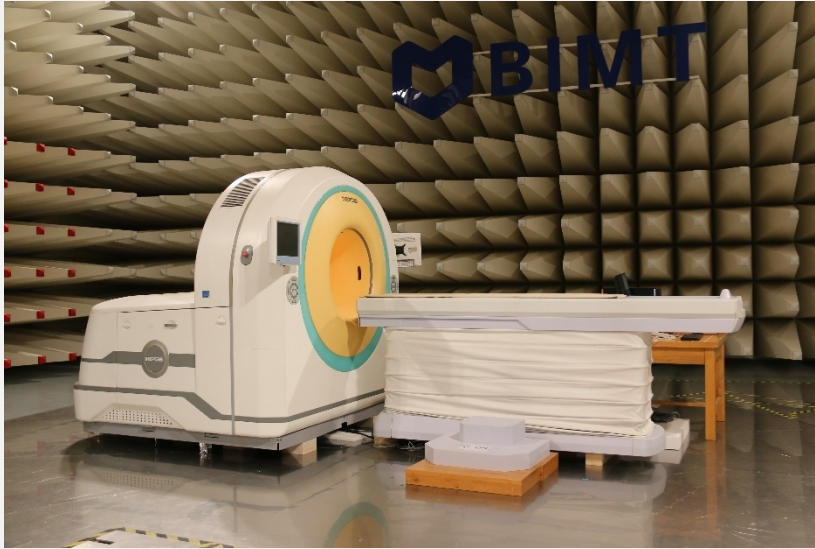
## **Our focus: device and technology for:**

- Imaging for clinic diagnosis and life science
- Nondestructive testing (NDT) for industry and laboratory
- Radiation safety monitoring
- Advanced compact accelerator

# Our Achievements

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Imaging devices for diagnosis  
and pre-clinical research



**Positron Emission Tomography  
(PET)**



**Positron Emission Mammography  
(with CFDA registration)**

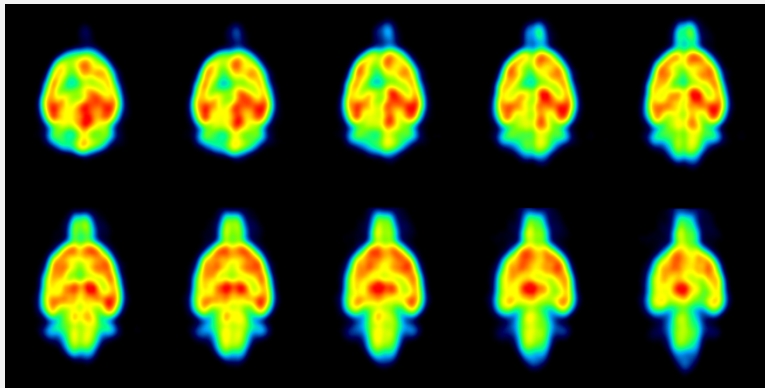


**Whole-body PET/CT  
for small animals**

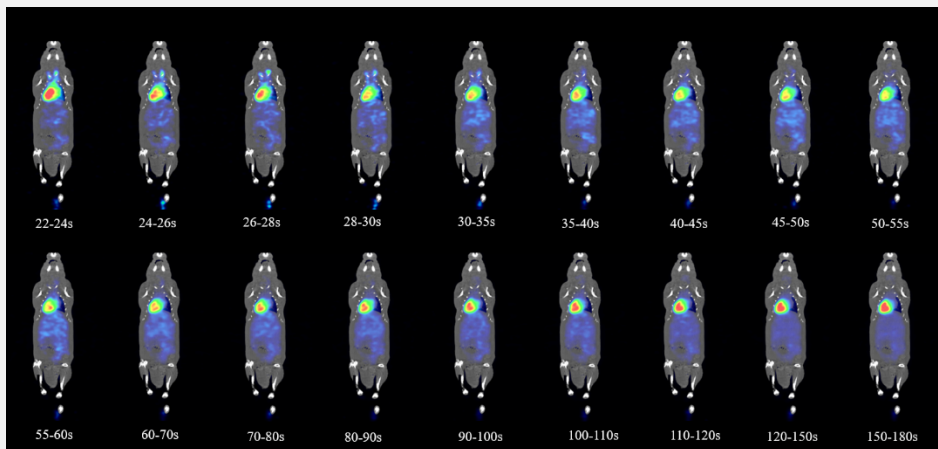


**Spectral CT for small animals**

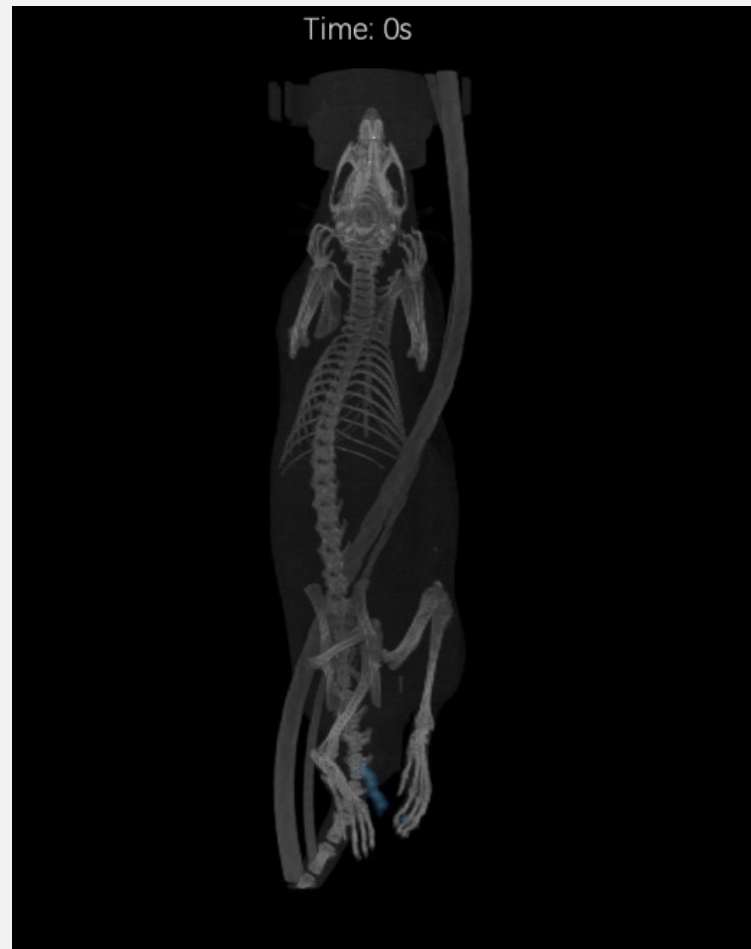
# Our Achievements



PET images of rat's brain



Dynamic PET/CT images of rat's heart

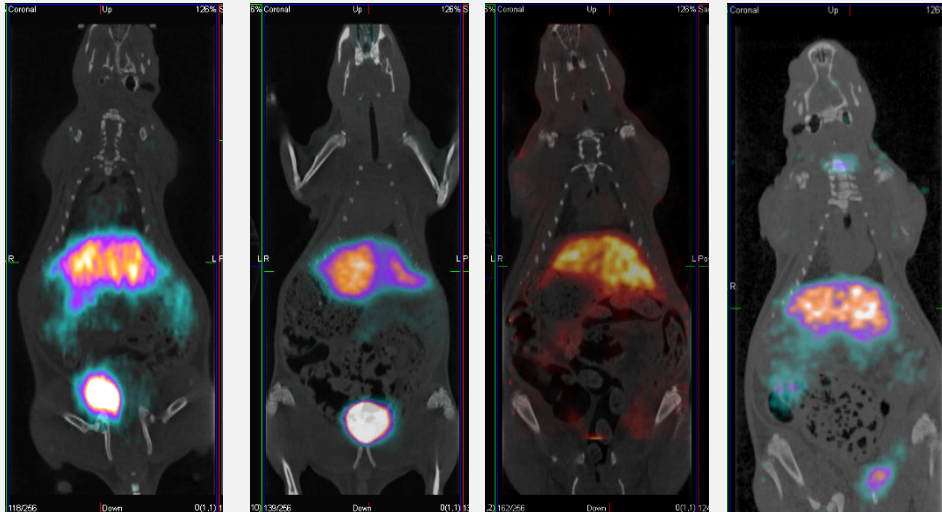


Dynamic PET/CT imaging of rat

# Our Achievements

Molecular probe

Rat PET and SPECT imaging

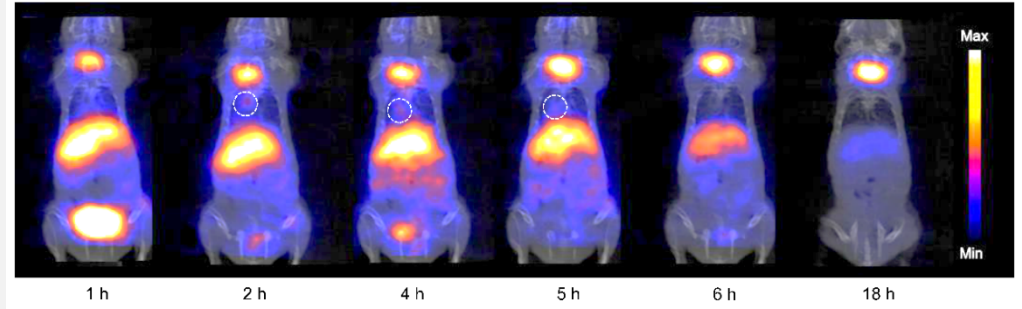


$^{99m}\text{Tc}$  SPECT

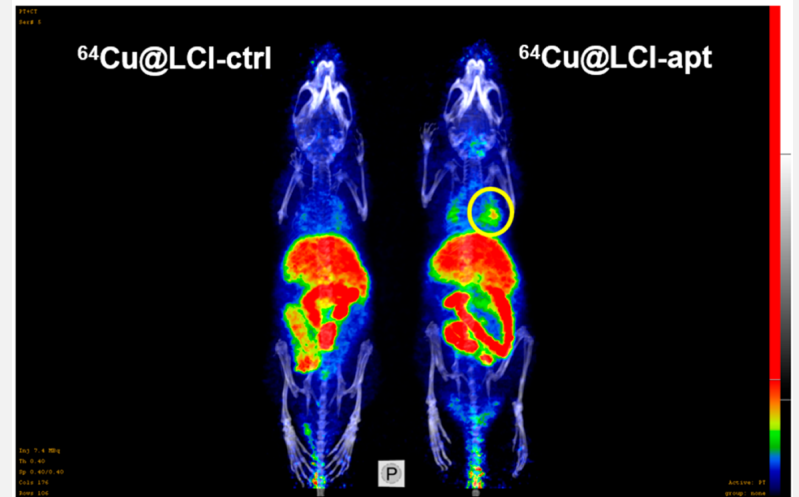
$^{68}\text{Ga}$  PET

$^{64}\text{Cu}$  PET

$^{124}\text{I}$  PET



Rat lung cancer PET imaging



Nude mouse lung cancer PET imaging



# Our Achievements

**CT equipment for industry and laboratory**



**锐影检测科技(济南)有限公司**  
*Ray Image Testing Technology (Ji Nan) Co. Ltd.*



**Computed Laminography**



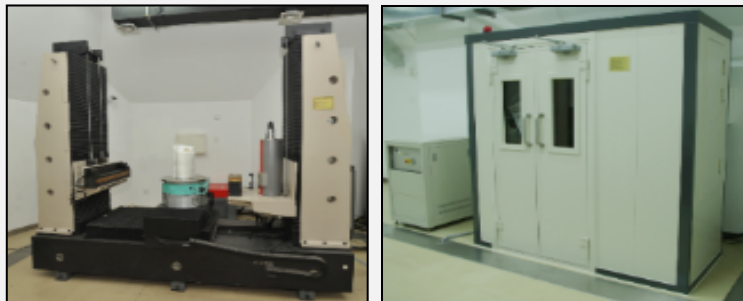
**Computed Laminography for IGBT testing**



**Spectral nanoCT**

# Our Achievements

## CT equipment for laboratory



Dedicated fossil CT

**nature**  
International journal of science

Article | Published: 13 June 2018

### An Early Cretaceous eutherian and the placental–marsupial dichotomy

Shundong Bi , Xiaoting Zheng, Xiaoli Wang , Natalie E. Cignetti, Shiling Yang & John R. Wible

Nature **558**, 390–395 (2018) | [Download Citation](#)

**nature**  
International journal of science

Article | Published: 13 November 2017

### A Jurassic gliding euharamiyidan mammal with an ear of five auditory bones

Gang Han, Fangyuan Mao , Shundong Bi, Yuanqing Wang & Jin Meng

Nature **551**, 451–456 (23 November 2017) | [Download Citation](#)

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Article | Published: 07 April 2021

### Fossoriality and evolutionary development of integrated hearing and chewing modules decoupled in a Cretaceous mammaliamorphs

Fangyuan Mao , Chi Zhang, Cuiyu Liu & Jin Meng

Nature **592**, 577–582 (2021) | [Cite this article](#)

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**nature**

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Article | Published: 27 November 2019

### Cretaceous fossil reveals a new pattern in mammalian middle ear evolution

Haibing Wang, Jin Meng & Yuanqing Wang

Nature **576**, 102–105 (2019) | [Cite this article](#)

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Letter | Published: 22 August 2018

### A Triassic stem turtle with an edentulous beak

Chun Li , Nicholas C. Fraser, Olivier Rieppel & Xiao-Chun Wu

Nature **560**, 476–479 (2018) | [Cite this article](#)

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REPORT

### Integrated hearing and chewing modules decoupled in a Cretaceous stem therian mammal

FANGYUAN MAO , YAOMING HU, CHUANKE LI, YUANQING WANG , MORGAN HILL CHASE, ANDREW K. SMITH , AND JIN MENG

[Authors info & Affiliations](#)

SCIENCE • 5 Dec 2019 • Vol 367/Issue 6475 • pp 305–308 • DOI: 10.1126/science.aba9320



# Our Achievements

## Radiation safety monitoring



Neural network based radiation source detection and tracking



Public radiation safety support



UAV carried radiation detector

# Our Achievements

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## Accelerators



**L-band 10MeV industrial  
irradiation accelerator**



**S-band 10MeV industrial  
irradiation accelerator**



**6MeV accelerator  
X-ray source**



**9MeV accelerator  
X-ray source**

# Position Description

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- **Opening:** Professor
- **Research area:** Nuclear medical imaging technology
- **Professional background requirements:**
  1. Professor or equivalent rank
  2. Experienced in PET/SPECT algorithm or instrumentation

# Position Description

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- **Opening:** Associate professor
- **Research area:** Nuclear medical imaging technology
- **Professional background requirements:**
  1. Associate professor or post doctorate experience abroad
  2. Experienced in PET/SPECT algorithm or instrumentation

# Position Description

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- **Opening:** Associate professor
- **Research area:** Radiation detector and system R&D
- **Professional background requirements:**
  1. Associate professor or post doctorate experience abroad
  2. Experienced in advanced radiation detector R&D



# Position Description

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- **Opening:** Post doctorate
- **Research area:** X-ray imaging technology
- **Professional background requirements:**
  1. 1) CT imaging theories, including reconstruction and data correction or 2) frontier basic research of physics and mathematics
  2. Innovative technology research of static CT and spectral CT, their applications in industry and medicine

# Position Description

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- **Opening:** Post doctorate
- **Research area:** Nuclear detection and imaging
- **Professional background requirements:**
  1. Nuclear detection technology research and detection system development
  2. Majoring in physics, nuclear science and technology, biomedical engineering; being familiar with particle physics and nuclear physics
  3. Good communication and cooperation

# Position Description

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- **Opening:** Post doctorate
- **Research area:** Molecular probe
- **Professional background requirements:**
  1. Frontier research of chemistry of radioactive medicine
  2. Diagnosis and treatment dual-purpose radioactive probe design and synthesis

# Position Description

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- **Opening:** Post doctorate
- **Research area:** Accelerator technology and application
- **Professional background requirements:**
  1. Advanced accelerator technology research and application
  2. Majoring in accelerator physics, accelerator technology and other relative area
  3. Experienced in accelerator system and key component R&D

# Welcome to join us!



**Dr. Wei, Cunfeng, Director of NTAD**

**Email: [weicf@ihep.ac.cn](mailto:weicf@ihep.ac.cn)**