

# NOMATEN JUNIOR SEMINAR

Tuesday, May 17 2022 13:00 (1.00PM CET)

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## Designing strong high-entropy alloys with ductility

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### **Abstract:**

In the history of mankind, each step in the progress of the civilization has been shaped by novel materials. The development of novel materials typically follows one or both of two pathways: new chemical composition and microstructure. For a long time, single-element base alloys (e.g., steels, copper alloys, and nickel alloys) have been understood and manufactured to achieve desirable microstructures and properties. The birth of a concept, high-entropy alloy, expands the available range of chemical composition in the field of alloy design. High-entropy alloys composed of multiple elements usually show remarkable properties. Outstanding mechanical properties in high-entropy alloys inspire novel ideas for the development of advanced metallic materials.

In this talk, I will discuss the recent progress about the strategies to obtain strong high-entropy alloys via solid solution strengthening, Hall-Petch strengthening, and nanotwinning strengthening.

### **Bio:**

I received the PhD in Materials Science and Engineering from Southeast University in China, and was a visiting student in Pohang University of Science and Technology in South Korea. Afterwards, I started to work in Nanjing Forestry University in China as Lecturer. Recently, I am employed as Assistant Professor at NOMATEN Centre of Excellence, National Centre for Nuclear Research, Poland.