

**Correlating Structure and
Properties in Additively
Manufactured Metals through
Multi-modal Characterization
Approaches Back**

Report of Contributions

Contribution ID: 2

Type: **not specified**

3D Printing, Synchrotron X-Ray Experiments and Machine Learning

Monday, 17 May 2021 10:00 (30 minutes)

Presenter: ROLLETT, Anthony (Carnegie Mellon)

Session Classification: Session 1: Synchrotron Techniques for Characterizing AM Metals

Contribution ID: 3

Type: **not specified**

The critical role of multi-modal and multi-scale measurements in driving development of practical additive manufacturing

Monday, 17 May 2021 10:30 (30 minutes)

Presenter: LEVINE, Lyle (NIST)

Session Classification: Session 1: Synchrotron Techniques for Characterizing AM Metals

Contribution ID: 4

Type: **not specified**

Using High Energy X-Ray Diffraction to Probe Additively Manufactured Metals over a Range of Length and Time Scales

Monday, 17 May 2021 11:00 (30 minutes)

Presenter: CARPENTER, John (LANL)

Session Classification: Session 1: Synchrotron Techniques for Characterizing AM Metals

Contribution ID: 5

Type: **not specified**

HEX: A new tool for microstructure analysis at the NSLS-2

Monday, 17 May 2021 11:30 (30 minutes)

Presenter: DRAKOPOULOS, Michael (BNL)

Session Classification: Session 1: Synchrotron Techniques for Characterizing AM Metals

Contribution ID: 6

Type: **not specified**

Use of Multi-Modal Synchrotron Analytical Techniques Combined with Electrochemical Analysis to Understand Corrosion Behavior in AM 316L

Monday, 17 May 2021 12:30 (30 minutes)

Presenter: HALADA, Gary (Stony Brook University)

Session Classification: Session 2: Correlating Structure with Properties and X-ray Imaging

Contribution ID: 7

Type: **not specified**

Role of Powder Composition on the Properties and Performance of Additively Manufactured Materials

Monday, 17 May 2021 13:00 (30 minutes)

Presenter: PALMER, Todd (Penn State)

Session Classification: Session 2: Correlating Structure with Properties and X-ray Imaging

Contribution ID: 8

Type: **not specified**

In-situ Characterization of LPBF Using SWIR Imaging

Monday, 17 May 2021 13:30 (30 minutes)

Presenter: KINZEL, Ed (Notre Dame)

Session Classification: Session 2: Correlating Structure with Properties and X-ray Imaging

Contribution ID: 9

Type: **not specified**

High-Speed X-ray Imaging of Metals by Additive Manufacturing

Monday, 17 May 2021 14:00 (30 minutes)

Presenter: KISS, Andrew (BNL)

Session Classification: Session 2: Correlating Structure with Properties and X-ray Imaging

Contribution ID: 10

Type: **not specified**

Exploiting processing space in additive manufacturing to enhance material performance

Monday, 17 May 2021 16:00 (30 minutes)

Presenter: STORCK, Steven (JHU-Applied Physics Lab)

Session Classification: Session 3: Toward Tunable Performance and Applications of AM

Contribution ID: 11

Type: **not specified**

Multiaxial fracture of additively manufactured 316L stainless steel

Monday, 17 May 2021 15:30 (30 minutes)

Presenter: BEESE, Allison (Penn State)

Session Classification: Session 3: Toward Tunable Performance and Applications of AM

Contribution ID: 12

Type: **not specified**

Challenges Facing Additive Manufacturing Applied to High Temperature Nuclear Components

Monday, 17 May 2021 16:30 (30 minutes)

Presenter: MCMURTREY, Michael (INL)

Session Classification: Session 3: Toward Tunable Performance and Applications of AM