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FOR IMMEDIATE RELEASE

AIST ANNOUNCES 2018 T.C. GRAHAM PRIZE FINALISTS *Recognizing innovative steel applications for development of new markets*

PITTSBURGH, 24 August 2018 — The [Association for Iron & Steel Technology \(AIST\)](#) is proud to announce the finalists for the third annual [T.C. Graham Prize](#). This unique contest was established in 2014 through an endowment from one of the steel industry's most successful and innovative executives, Tom C. Graham Sr.

The T.C. Graham Prize recognizes innovative applications for steel that may lead to the development of new markets. The winning entry will receive US\$20,000.

Entries for the 2018 T.C. Graham Prize competition represented a diverse group of individual applicants and teams from the United States and several countries around the world. After the proposals were reviewed by steel industry professionals, four semi-finalists were chosen. The semi-finalists delivered their presentations to AIST on Tuesday, 21 August 2018, where three finalists were selected.

The 2018 T.C. Graham Prize finalists are:

1) “Stronger Than Titanium, Lighter Than Aluminum and Lower Cost Than High-Strength Steel” for Lighter, Safer, More Fuel-Efficient Automobiles and Armored Vehicles

Gary Cola, Washington Twp., Mich., USA

Flash Bainite processing is an evolutionary steel heat treating technology capable of producing 1,600 MPa sheet in just 5 seconds. Flash 1600 has been proven in automotive OEM test labs to reduce mass 20–58% while maintaining performance and reducing cost. Flash technology is an entirely new field of ferrous metallurgy that leverages the natural heterogeneity of steel to create a highly complex, nanorefined microstructure with unparalleled mechanical properties.

2) Nanotexturing to Make Bactericidal Stainless Steel for Food/Beverage, Health Care and Consumer Products Industries

Julie Champion and Dennis Hess, Atlanta, Ga., USA

We have demonstrated that creation of nanotexture on stainless steel by electrochemical etching decreases attachment of bacteria and kills bacteria while simultaneously improving corrosion resistance. The goal of our current work is to scale up and establish the feasibility of translating electrochemical etching as a method of creating nanotexture on stainless steel food and beverage equipment, biomedical devices, and a variety of other surfaces to prevent bacterial infection.

3) An Introduction to the Next Breakthrough in Advanced Materials; Novel Steel Composite Metal Foam

Afsaneh Rabiei, Raleigh, N.C., USA

Steel-steel composite metal foam (CMF) is a low-weight, high-strength metal foam manufactured using hollow steel spheres embedded in a steel matrix. This material has shown superior mechanical properties under loading, fire, radiation, and even blast and fragments impact. Such properties have made steel-steel composite metal foams strong candidates for applications in many structural components.

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Finalists will present their proposals to the [Contest Jury](#) on 28 August. The Contest Jury consists of **John Ferriola**, chairman, president and chief executive officer, Nucor Corp.; **Mark Millett**, president and chief executive officer, Steel Dynamics Inc.; and **Roger Newport**, chief executive officer, AK Steel; and Barbara Smith, president and chief executive officer, Commercial Metals Company.

For more information regarding the T.C. Graham Prize or to read about last year's winner, please visit the [T.C. Graham Prize webpage](#).

[AIST](#) is a non-profit technical association of 17,500 members from 70 countries, with the mission to advance the technical development, production, processing and application of iron and steel. The organization is recognized as a global leader in networking, education and sustainability programs for advancing iron and steel technology.

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