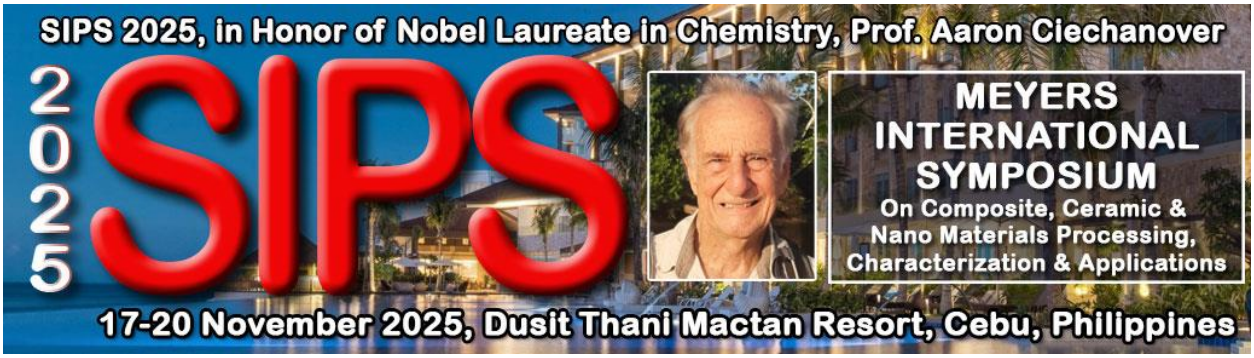

Biography of Marc Meyers

Marc Andre Meyers is a graduate (Mechanical Engineering) of the Federal University of Minas Gerais, and earned his doctorate at the University of Denver. Professors Charles Barrett and R. Norman Orava were mentors who inspired him to pursue an academic career. He held university positions at the Military Institute of Engineering (Rio de Janeiro), South Dakota School of Mines and Technology, and New Mexico Institute of Mining and Technology, prior to joining the University of California, San Diego where he is Distinguished Professor. Dr. Meyers' visionary effort at unifying dispersed activities through thefundamental physics and chemistry principles relevant to high strain rate deformation have given rise to the field of *dynamic behavior of materials*. The principles developed have been relevant for designing high rate forming and fabrication processes as well as material failure during impact or explosive loading applications. The principal scientific contributions for which he is recognized include: the mechanisms ofgeneration of annealing twins, dislocation generation under shock loading, slip-twinning transition in metals and recrystallized nano/ microstructure in adiabatic shear bands. Although his area of specialization is the dynamic behavior of materials, he has contributed to nanocrystalline materials, synthesis and processing, and mechanical properties in general, with an emphasis on fundamental mechanisms.

In recent years he has turned his curiosity and effort to biological, biomedical, and bioinspired materials and, in particular, how they derive their mechanical properties in terms of their hierarchical structure/architecture. His work in this area, whether associated with abalone shells, toucan beaks, fish scales or teeth, among many other biological materials, has been an inspiration and has generated worldwide interest in terms of the complex structure/property relationships that they portray and the complicated nano/micro-mechanisms that underlie their mechanical performance. His work, published in over 500 articles, is globally recognized (google scholar HI: 115) and widely cited (60,000 citations).

In addition, he exercised global leadership throughout his career and worked toward the integration of the American Materials societies, coorganizing and co-chairing three Pan American Materials Congresses (2010, 2014, and 2017). He co-founded (with L. E. Mur)

five EXPLOMET conferences and proceedings. With Max Brook, he co-founded the Center for Explosives Technology Research (now named EMRTC) at New Mexico Tech. He co-chaired the TMS symposia on Dynamic Behavior of Materials and created the Rinehart Award, the highest accolade in the European DYMAT Assoc. In the biomaterials domain, he co-chaired two international conferences on Mechanics Biomaterials and Tissues. With Sungho Ji, he co-founded TMS Biomaterials Symposium. As a trustee, TMS Foundation, he is spearheading an effort to support Latin American students to TMS meetings. He is also editor-in-Chief, Brazil-originated (ABM) Journal of Materials Research and Technology now widely recognized and projecting Latin American materials research globally.

In the educational area, he taught over hundred classes, advised 56 doctoral dissertations and authored or co-authored four successful textbooks translated into Chinese and Portuguese and organized four summer schools with leading scholars and students recruited globally He also writes fiction and retraced the 1914 Roosevelt Rondon expedition to the Amazon in 2014.

Dr. Meyers is a Fellow of TMS, APS, ASM International and the Brazilian Academy of Sciences. He has received numerous awards, including the APS George Duvall Shock Compression Award, the European Dymat Society's Rinehart Award, the TMS Mehl Award, the Morris Cohen Award, the Weertman Education Award, the German Materials Society (DGM) Heyn Medal and the Chinese Institute for Metal Research Lee Hsun Award. He is also recipient of the German Humbolt Senior Scientist Award, the Luxembourg Institut Grand Ducal's Grand Prix en Sciences and the Acta Materiala Hollomon Award in Materials and Society . Meyers received the prestigious Acta Materialia Gold Medal at the TMS Annual Meeting in Las Vegas in March 2025.