



THE INTELLECTUAL PROPERTY LAW ASSOCIATION OF CHICAGO

Proudly Presents The

2013 Creative Achievement Award

The IPLAC Creative Achievement Award is given to honor the creative achievements, primarily in the Chicago metropolitan area, which are eligible for any form of intellectual property protection – patents, copyrights, or trademarks. This year IPLAC is proud to recognize Gregory B. Olson Sc.D., a professor of engineering at Northwestern University and co-founder and Chief Science Officer of QuesTek Innovations LLC, as the winner of the 2013 IPLAC Creative Achievement Award.

Dr. Olson has received over 11 U.S. patents (and numerous foreign patents), and his company QuesTek has received numerous registered trademarks, which are directed to the computational design of new materials and novel production processes for improving material properties and performance. His *Materials by Design*[®] technology uses proprietary software and highly refined technical data bases to identify and create new materials more quickly and less expensively by eliminating time consuming and costly “trial and error” techniques of the past. His techniques have reduced material development times by as much as 50% and costs by 70%. His company, QuesTek Innovations, is located in Evanston and works extensively with the Department of Defense (DoD), other agencies of the US government, and commercial clients worldwide in the creation of advanced materials.

One example of a new alloy created by Dr. Olson is *Ferrium*[®] *S53*[®], which is being used in structural aerospace landing gear components and high performance helicopter transmission applications. *Ferrium S53* was designed in response to the need by the DoD for a unique high strength steel that had enough corrosion resistance to eliminate the need for toxic cadmium coating, which is used for corrosion protection on other structural aerospace steels. *S53* became the first computationally-designed material to be qualified for flight when, in 2010, a T-38 aircraft with landing gear made from *S53* began more than 19 months of field service evaluations by the U.S. Air Force and has now completed more than 500 landings. This new alloy has performed as good or better than the incumbent alloy,





but without the use of toxic cadmium coating. S53 landing gear components have been or are in the process of being produced and flown on the following military platforms: A-10, KC-135, and C-5. Prototype transmission rotorshafts have also been made for the U.S. Navy and Sikorsky for the MH-60S helicopter platform. QuesTek's design and development of *Ferrium S53* saved approximately \$50 million, and won the "Pollution Prevention Project of the Year" Award from the Department of Defense's SERDP/ESTCP program office.

Dr. Olson, the Walter P. Murphy Professor of Materials Science and Engineering, has been a professor at Northwestern since 1988. He is active in numerous industrial, technical and professional associations and the author/co-author of more than a dozen books and over 200 publications. At his induction ceremony in 2012 into the American Academy of Arts and Sciences, he was introduced as "The Father of Materials Design." He has a daughter and presently lives in Riverswood, IL with his wife Jane.