

3<sup>rd</sup> International Conference and Expo on

# Ceramics and Composite Materials

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## Giampaolo Crepaldi

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### Composite materials carbon/carbon, carbon SiC ceramic matrix

The composite materials are born to obtain a good balance between weight, strength and ductility. In addition, the processing systems and new methods of reuse made it more and more convenient. Now we are bringing the extreme use of the composite with the production of advanced ceramic composites Carbon/Carbon and Carbon/SiC. These products have a temperature resistance at about 3000°C and the opposite up to -200°C. It is a monolith that does not deform or melt when subjected to thermal shock as is the case for metals. Furthermore, in addition to being much more hard and non-deformable resistant they are much lighter than steel or titanium. Chevron industries have developed a number of products in Carbon/Carbon with complete proposal of HT items in the world market with the brand name Bluesteel™, Dura™, Ultimate™ and Quantum™. Our company is also sensitive to weight reduction in the cost of manufacture of the components that are the driving forces for the new composite that must be developed by the cost-effective process. In fact, we use a process with Triple Thermal Treatment (exclusive plasma combined named TTT® IPR) that uses the combination of microwave/infrared reducing energy consumption by 85%, CO<sub>2</sub> emissions by 87% below the traditional method and with faster processing times 40% (here under one of the operating diagram of a Chemical Reactor CVI/CVD with TTT® methodology).

### Biography

Giampaolo Crepaldi is a CEO and Chairman of the Board of Chevron Industries since the very beginning, when it was resolved to open its operational unit in the UK, to develop the alternative green energy aspects and provide the third generation of the TTT Technology and several other IPRs. His background begins in the early 80s, when he was a young textile engineer working as a Technical Director with one of the biggest technology fibers of that time in Piedmont, Italy up to 1989. Up to 1991, he developed new alternative fibers technologies with Universal Insulating, and up to 1994 he developed international experiences in the high technologies field working with Belgian and French companies as a High Specilized Process and Innovation Consultant. From 1994 to 1996, he was with Tecnotex, then up to 2000 he was with Tecno Europa to develop new ceramic, silica and quartz fibers with new technologies, from 2000 to 2006. He has always worked in projects liaisons, from chemical to textile, to mechanic developments. He is among inventors of processes, machinery, and equipment, generally devoted to the improvement of standard industrial processes or to create brand new ones based on the principle of improving the environmental friendly impact as well as products quality.

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