

# Plastics in the Auto Industry: What's Next?

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March 17, 2014

# Who is Continental Structural Plastics?

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The global leader in advanced composite solutions:

- Founded in 1969
- Our strategic global footprint:
  - Auburn Hills, MI (HQ)
  - Carey, OH
  - Conneaut, OH
  - Grabill, IN
  - Huntington, IN
  - Lenoir, NC
  - Newton, NC
  - North Baltimore, OH
  - Pouancé, France
  - Salisbury, NC
  - Saltillo, Mexico
  - Sarepta, LA
  - Tangshan City, China (JV)
  - Tijuana, Mexico
  - Van Wert, OH
- 2,700 employees
- Approximately \$600 million in sales
- 50+ active patents

# The Drive to Lightweighting

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CAFE standards  $\Rightarrow$  Improved fuel economy  $\Rightarrow$  Light-weighting initiatives

- Achieving standards will involve a balancing act
  - Solutions versus weight reduction versus premium involved
- Higher performing steels, aluminum and magnesium
- Engineered plastics, advanced composites and hybrids
- What penalty will the market bear?



# What's Next?

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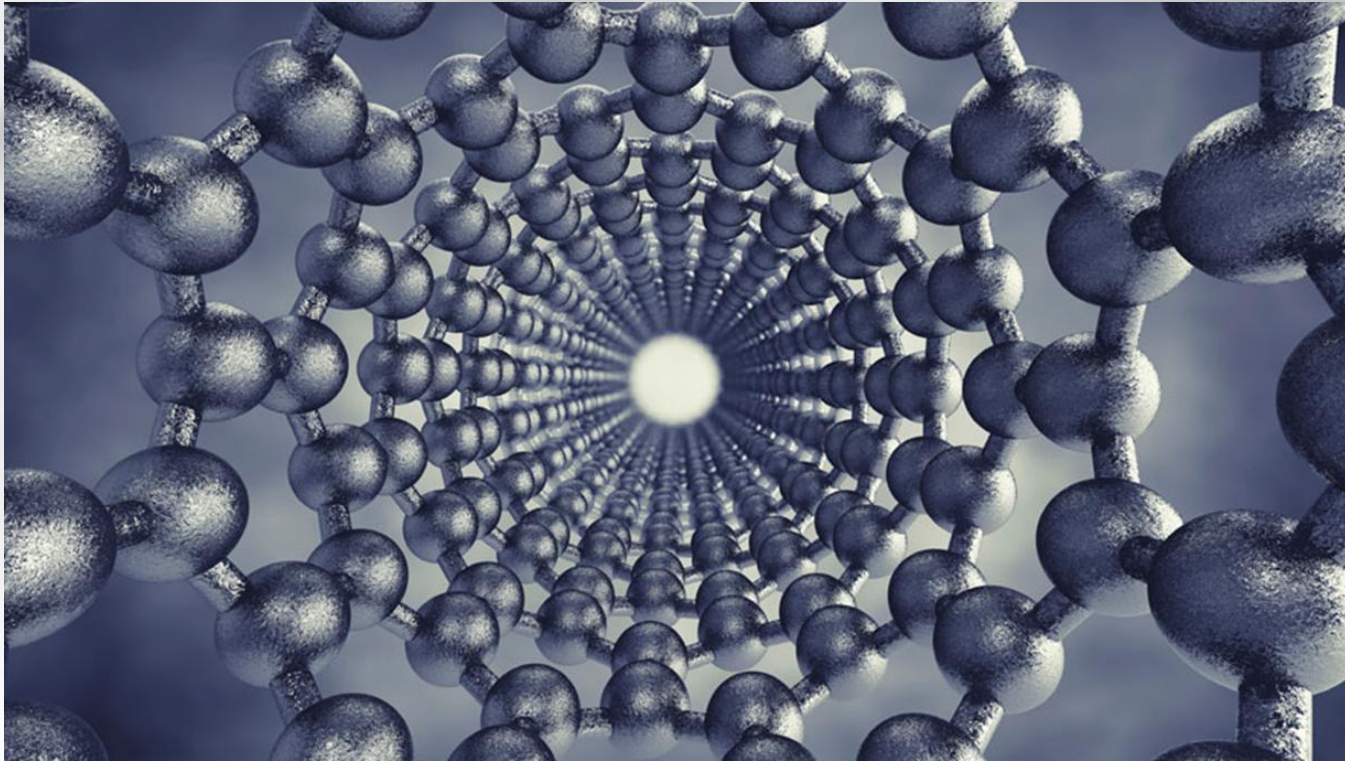
- Carbon fiber
- Recycled carbon fiber
- Continuous carbon fiber
- Hybrids and derivatives
- Thermoplastic hybrids



# What's Next?

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Graphene – strongest material in the world



# Bridging the Gap

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## TCA<sup>®</sup> Ultra Lite<sup>®</sup>

- 1.2 specific gravity Class A composite material
- 40% reduction in density over standard TCA
- Affordable alternative to aluminum
- Proprietary filler and resin formulation make the material incredibly robust




# Use Will Increase Rapidly

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Plastics use (per vehicle):

Today = 400 pounds  2020 = 700+ pounds

Carbon fiber market (in auto industry):

2014 = 3,700 tons  2030 = 10,800 tons

# No Simple Answer

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**And beyond...**