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Enabling Automotive Innovation: Tales from a Physicist in Industry

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Measurements and instrumentation play an obvious and critical technical role in the automotive industry to assure compliance with government and industry standards such as emissions and fuel economy. Less obvious and equally critical is the role they play in innovative materials for future transportation needs. In today's open innovation environment, where research is distributed among industrial, academic, and government lab partners, the ability to capture, validate, and incorporate both internal and external inventions combines a deep knowledge base and the research tools to evaluate advanced materials and processes. Examples of the impact of measurements and instrumentation on internal, external, and shared research will be given from the experiences of the author and his research colleagues.