

Graphene 2016-2026: Markets, Technologies and Players

Dr Khasha Ghaffarzadeh, Head of Consulting

IDTechEx, Downing Park, Station Road, Cambridge, CB25 0NW
khasha@IDTechEx.com

Abstract

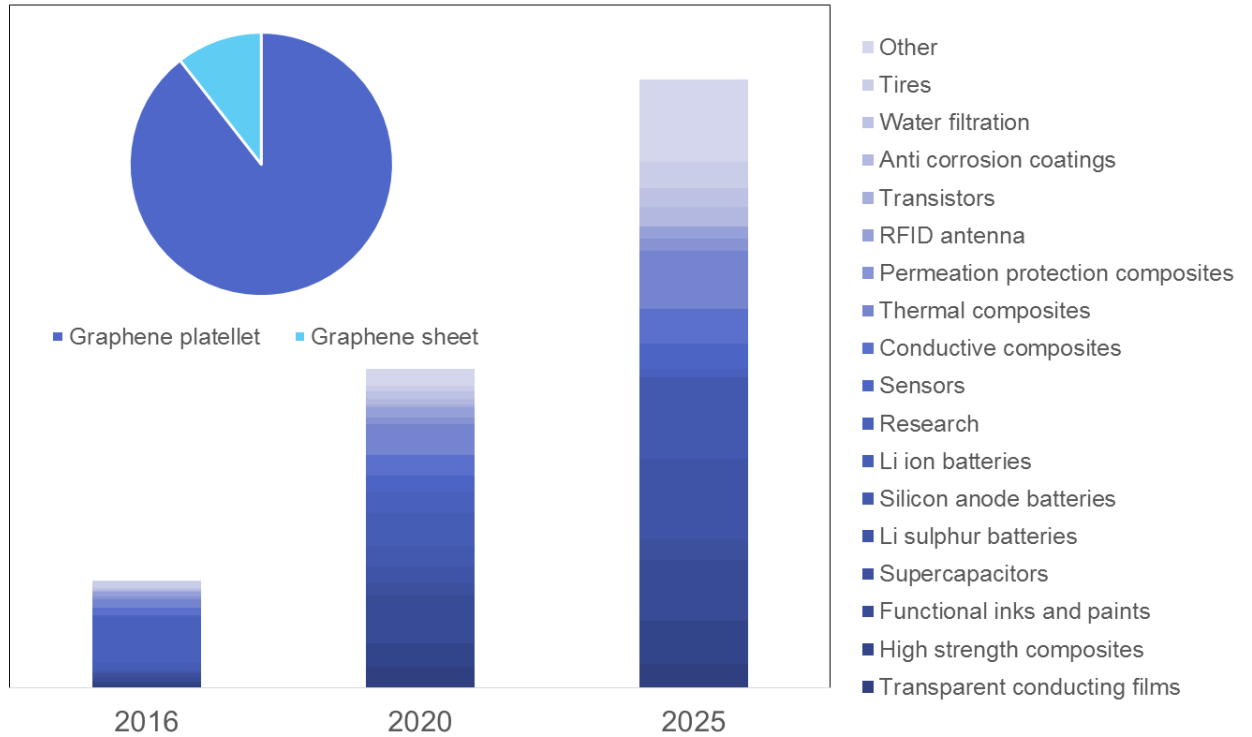
The graphene industry is still largely in the red and company valuations are generally on the decline. Despite this, the industry is beginning to register revenue growth. Indeed, IDTechEx Research forecasts that revenues will reach \$30m in 2016 with research and grant money continuing to play a substantial role. The market will not sustain all the suppliers and the conditions are ripe for consolidation since the landscape is populated with too many weakly-capitalized and poorly-differentiated players that each generate small revenues. This will benefit the industry as a whole since it will reduce the market fragmentation and creates larger and better consolidated entities able to stand on their own feet.

IDTechEx Research forecasts that the market will grow to \$220m in 2026. This forecast is at the material level and does not count the value of graphene-enabled products. In many instances graphene is an additives with low wt% values. This revenue growth will be accompanied by a continued decline in average sales prices, meaning that volume sales will reach nearly 3.8 k tpa (tonnes per annum) in 2026. Our forecasts suggest that the industry will remain in a state of over-capacity until 2021 beyond which time new capacity will need to be installed. Furthermore, IDTechEx Research forecasts that nearly 90% of the market value will go to graphene platelets (vs. sheets) in 2026.

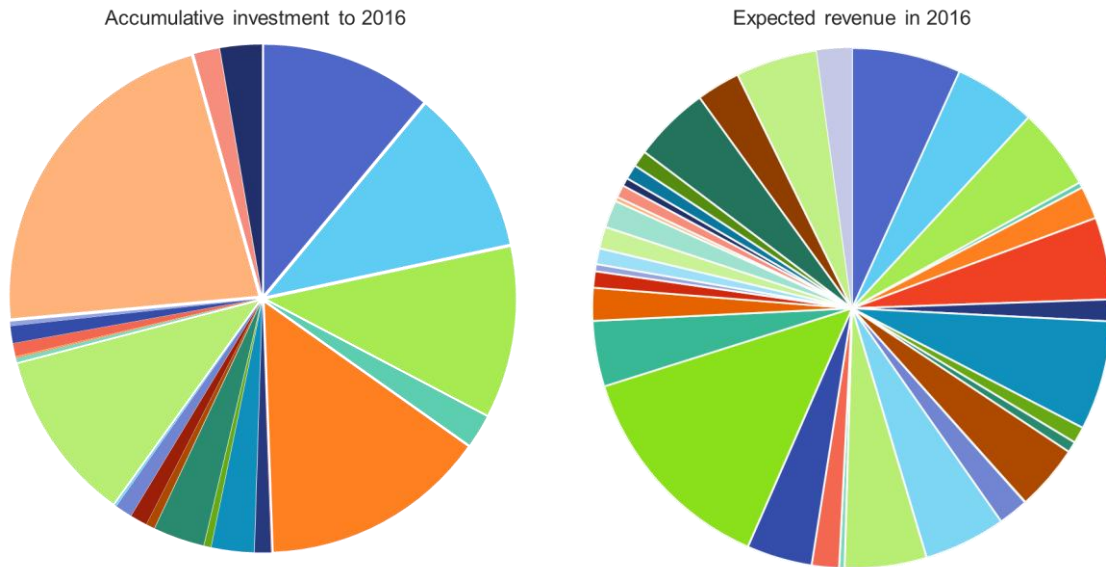
The market will be segmented across many applications, reflecting the diverse properties of graphene. In general, we expect functional inks and coatings to reach the market earlier. This is a trend that we forecasted several years ago and is now observed in prototypes and small-volume applications. Ultimately, energy storage and composites will however grow to be the largest markets for graphene, controlling 25% and 40% of the market in 2026, respectively.

In this talk, IDTechEx Research will provide a critical review of the market, analyzing the latest trends and market movements. We will then quantitatively describe the business landscape as it exists today and will give our insight on how the industry will evolve over the coming decade. We will then focus on key areas of application focus in the industry such as inks and coatings, composites and various energy storage applications.

Figures



Ten-year market projections split by application. Actual data will be shown in the conference. Inset: market share of graphene platelets vs sheets in 2026 by value. Source: IDTechEx



Left: accumulative investment in new graphene companies. This excludes money spent internally by large organisations on their own R&D. More than \$200m has been invested. This figure is based on interviews, company visits, financial statements, press releases, etc. Right: expected revenue for graphene companies in 2026. This figure also includes some limited equipment sales. Actual data will be shown in our presentation. Source: IDTechEx