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# International standardization on graphene and other 2D materials: Status and future prospects

The academic community has identified a large number of extraordinary properties for graphene and other 2D materials leading to thousands of scientific publications per year. Therefore, the industry recognized them as new materials suitable for increasing performance of existing and future products. Potential applications are touching a wide range of industries. Especially the electrotechnical industry recognized graphene and other 2D materials as key enabler for future innovative products. Nevertheless, especially due to the lack of standards it is difficult to specify the materials consistently. This challenge was taken up by Technical Committee 113 of the International Electrotechnical Commission which initiated a number standardization projects to support commercialization of the technology and therefore the business of its stakeholders.

Due to the urgency of the need for standardization consortia consisting of manufacturer associations, commercial associations, industrial companies, user groups, and professional and scientific societies have also stated that they will start their own standardization activities. These consortia are permanent and non-permanent as in case of EU founded projects for example. Therefore, TC 113 has made a lot of efforts to contact these consortia involving them in their projects. Currently IEC/TC 113 and partnering consortia are making a lot of efforts to develop a consistent system of standards which fulfills the requirements of the industry.

The presentation will give an update about the evolution of the standardization landscape for graphene and other 2D materials, give an overview about the current status of standardization and what has to be added in the near future. This includes the role of IEC 62565-3-1, the blank detail specification for graphene, which lists the key control characteristics for the material as well as the methods to measure them.

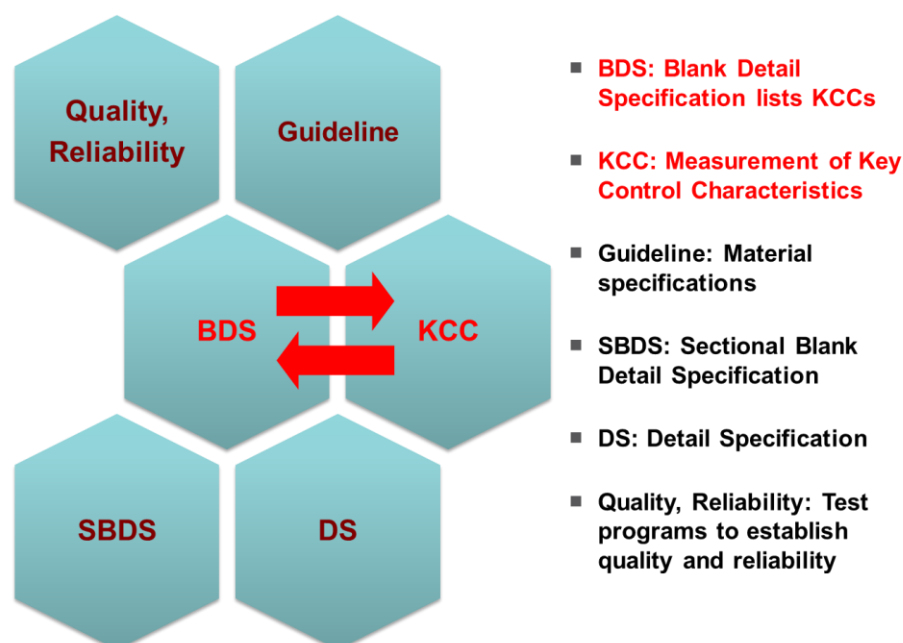


Figure 1: Systematic of standards developed in IEC/TC 113