

# Group 2: Inorganic nanomaterials

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# Recommendation #1

Context: brief discussion around the desirability, timing, and scope of the ANSI-NSP effort, occasioned by input from other groups' discussions

## Recommendation

We agree that the development of a general nomenclature system for nanostructures and nanostructured materials is timely and highly desirable.

# Recommendation #2

Context: results of brainstorming session and subsequent grouping of results. Groupings included structure, composition, properties (chemical, biological, physical), metrology, and process. Temporal descriptors were noted as unique but absent.

## Recommendation

We recommend a nomenclature system that incorporates **morphology, size, composition, and crystallinity** as a *minimum*, with ranges of each.

# Recommendation #3

Context: discussion of “cross-cutting” issues led to the possibility of creating a nomenclature that spanned the compositional segments used for the break-out group assignments. Similar, if slightly expanded, nomenclature should suffice for description of inorganic carbons.

## Recommendation

We recommend combining carbon and other inorganic nanostructures in a common nomenclature system.

# Recommendation #4

Context: the commonalities between inorganic carbons and “metallic, insulating, and semiconducting” particles were obvious, and a more universal approach to the nomenclature was suggested. The results from our previous work, however, were insufficient for the task. Though obviously greatly preferred, it is currently unclear whether universality, simplicity, and precision can co-exist.

## Recommendation

We recommend exploring the possibility of designing compatible nomenclature systems for inorganic, polymer/organic, and hybrid nanostructures.

# Recommendations: summary

- We agree that the development of a general nomenclature system for nanostructures and nanostructured materials is timely and highly desirable.
- We recommend a nomenclature system that incorporates **morphology, size, composition, and crystallinity** as a *minimum*, with ranges of each.
- We recommend combining carbon and other inorganic nanostructures in a common nomenclature system.
- We recommend exploring the possibility of designing compatible nomenclature systems for inorganic, polymer/organic, and hybrid nanostructures.