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TITLE: Search for water and life's building blocks in the universe: A summary

ABSTRACT BODY:

Abstract Body: Water and organic compounds are essential ingredients for life on Earth and possibly elsewhere. In gaseous form water acts as a coolant that allows interstellar gas clouds to collapse to form stars, whereas water ice covers small dust particles that agglomerate to form planetesimals and planets. The variety of organic compounds identified in interstellar and circumstellar regions reflects complex reaction schemes in the gaseous and icy/solid state. Interstellar volatiles and refractory materials were processed and radially mixed within the protostellar disk from which our solar system formed. But the dynamic solar nebula was also a source for new materials and the search for water and life's building blocks on terrestrial planets, most of the outer-solar-system satellites as well as small solar system bodies reveals exciting new findings. The analysis of small bodies and their fragments, meteorites and interplanetary dust particles, sheds lights onto the extraterrestrial delivery process of prebiotic molecules to young planets and the pathways to life's origin on Earth and possibly elsewhere. We summarize the results of invited and contributed papers of this Focus Meeting which will allow us to better assess the habitability of objects in our solar system and provide constraints for exoplanets.

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