

## Preface to the HTC 2012 special issue

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This special issue contains fully reviewed papers, emanating from presentations given at high temperature capillarity (HTC) 2012. HTC 2012 was the seventh conference in this series, following conferences held in Athens, Greece (2009); Alicante, Spain (2007); Sanremo, Italy (2004); Kurashiki, Japan (2000); Krakow, Poland (1997); and Smolenice, Slovakia (1994).

High temperature capillarity 2012 followed the format of previous HTC conferences, based on a single-session conference focused on invited lectures, selected submitted oral presentations, and a poster session running the duration of the conference which allowed for extended discussions. Topics included the surface energy of liquids and solids, the thermodynamics of wetting versus the kinetics of spreading, adsorption and complexions, solid–liquid and solid–solid interface morphology and structure, dewetting, capillarity at solid interfaces, the role of interfaces in processing, and surface stresses. In general, HTC 2012 included a series of presentations aimed at bridging the gap between atomistic versus continuum approaches to interfaces, and their role in HTC phenomena.

The sequence of manuscripts in this special issue opens with three review papers. The first covers the topic of wetting of ceramics by silicon alloys [1], the second discusses our current understanding of dissolutive wetting [2], and the third explores wetting and joining of high temperature materials based on diborides [3]. The section containing full manuscripts opens with a paper describing a new software tool for simulating interface morphology [4], followed by a series of papers on interface thermodynamics [5–12], and non-reactive and reactive wetting systems [13–26]. This is followed by a

series of papers exploring the use of sessile drop experiments, reactive wetting, and applied joining and processing.

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