

Abstract Submitted
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Synchronization in Networks of Coupled Chemical Oscillators

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chemical oscillators. Experiments and simulations are carried out on networks with
different topologies and modes of coupling. We describe experimental and modeling
studies of chimera and phase-cluster states and their relation to other synchroniza-
tion states. Networks of integrate-and-fire oscillators are also studied in which sus-
tained coordinated activity is exhibited. Individual nodes display incoherent firing
events; however, a dominant frequency within the collective signal is exhibited. The
introduction of spike-timing-dependent plasticity allows the network to evolve and
leads to a stable unimodal link-weight distribution. M. R. Tinsley et al., *Nature
Physics* 8, 662 (2012); S. Nkomo et al., *Phys. Rev. Lett.* 110, 244102 (2013); H. Ke
et al., in preparation.

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