## Inverse Demand Diels-Alder Approach Towards framework of Atisanes: Generation of Molecular Complexity from Simple Aromatics

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Atisanes are an important class of diterpenoid that has considerable interest in their synthesis by virtue of biological interesting properties and complex molecular architecture.<sup>1</sup> Various natural products of atisane family exhibit important biological properties. For example, serofendic acid A **1**, isolated from calf serum, exhibit neuroprotective activity.<sup>1a</sup> Gumiferolic acid **2** isolated from *Margotia gummifera* by Pinar et al<sup>1b</sup> shows remarkable plant growth activity. These natural products have unique molecular architecture containing a bicyclo[2.2.2]octane system annulated to decalin ring system. In continuation of our studies on generation of molecular complexity from aromatics,<sup>2</sup> we considered devising synthesis of carbocyclic frameworks **3a,b** of atisanes from simple aromatic precursor such as **4a,b** (**Fig. 1**). Oxidative dearomatization and inverse demand  $0^4$ s+ $0^2$ s cycloaddition are the key features of our design.



## References

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