

## Special Issue

# Ferrimagnetic Materials: State of the Art and Future Perspectives

### Message from the Guest Editor

Since the beginning of the 1990s, with the introduction of organic ligands between magnetic cations, magnetochemistry has seen significant development. This molecular “do it yourself kit” has allowed us to synthesize new ferrimagnets (initially considered by Néel to be exclusive antiferromagnets). As a result, through the full control of their microscopic magnetic properties, it is now possible to impose the ferromagnetic or antiferromagnetic character of exchange energy, the magnitude of the magnetic moment per site, the dimensionality of spin lattices (1d, 2d or 3d), transport properties, notably in the field of molecular electronics and magnetic semiconductors, but also the hysteresis phenomenon important for industrial applications. Simultaneously, new theoretical modeling challenges have emerged. **Keywords**

Ferrimagnetism  
antiferromagnetism  
ferromagnetism  
Heisenberg couplings  
Ising (z-z) couplings  
x-y couplings  
insulator  
magnetic semiconductor  
molecular electronics

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### Deadline for manuscript submissions

closed (30 September 2022)



## Magnetoechemistry

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Impact Factor 2.5  
CiteScore 4.6



[mdpi.com/si/115367](https://mdpi.com/si/115367)

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