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	Laser wavelength		
	325 nm	442 nm	532 nm
CePO₄	 Broad-band emission distinct emission in LuPO ₄ and YPO ₄	 Emission outside observed spectral range	 Emission outside observed spectral range
PrPO₄	  Absorptions <750 nm no distinct emission	 Distinct emission lines	 Inefficient excitation
NdPO₄	  Absorptions <750 nm distinct emission lines >750 nm	  Inefficient excitation distinct emission ~900 nm	 Distinct emission lines
SmPO₄	  Absorptions <750 nm weak emission lines ~600 nm	 Distinct emission lines	  Distinct emission lines few emission lines below observed spectral range
EuPO₄	 Distinct emission lines	 Distinct emission lines	 Distinct emission lines
GdPO₄	 Emission below observed spectral range	 Emission below observed spectral range	 Emission below observed spectral range
TbPO₄	 Distinct emission lines	 Distinct emission lines	  Distinct emission lines few emission lines below observed spectral range
DyPO₄	 Distinct emission lines	 Distinct emission lines	  Few distinct emission lines several emission lines below observed spectral range
HoPO₄	  Absorptions <700 nm weak emission lines >700 nm	  Absorptions <600 nm distinct emission lines >600 nm	 Distinct emission lines
ErPO₄	  Absorptions <750 nm distinct emission >750 nm	 Distinct emission lines	  Distinct emission lines few emission lines below observed spectral range
TmPO₄	  Absorptions <750 nm no distinct emission	  Absorptions <750 nm no distinct emission	  Absorptions <750 nm no distinct emission
YbPO₄	 Distinct emission lines	No data	 Distinct emission lines



Successful REE emission line excitation



Measurement conditions not appropriate for REE emission line excitation and/or inappropriate detection range



Significant REE absorption features in broad-band emission