Development of multilayer coatings on EUV optics

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It has become very known that remote sensing in the EUV is a promising method to observe planetary atmospheres.
During last decade, we developed the multilayer coating technique to build the EUV optics for terrestrial plasmasphere imaging.
This technuque led us to succeed in plasmaspheric He II (30.4nm) imaging.

During this decade, we pursue further breakthrough in the multilayer coating technique.
A great variety of EUV spectroscopies in planetary atmospheres are expected:
Venus has strong EUV emission lines in He I (58.4nm) and O II(83.4nm), and
Jupiter has ionized sulfur emission lines in 40-60nm spectral range.
On the other hand, Mercury's atmosphere has not been explored so far.
Therefore, an imaging spectropeter is needed.
A multi-coating grating for EUV is key optics to explore this planet.