To simulate photoionization and photodetachment cross sections, as well as polarizability dispersion profiles below the ionization threshold, a discretized (pseudo)-spectrum stretching over the entire frequency region (including the continuum) obtained from an asymmetric Lanczos algorithm at the coupled cluster singles and doubles level is used to reconstruct the complex dipole polarizability, on which an analytic continuation procedure is then applied. Through a suitable selection of points in the complex plane, which we have shown can be quite general, we were able to perform an analytical continuation procedure. Results are reported for atoms He and Ne, molecules H₂, N₂, CH₄, H₂CO, C₂H₂, CO₂, CO, H₂O, NH₃, and SO₂, and anions H⁻, F⁻, OH⁻, and NH₂⁻. The method employed has proved to work well with a rather small Lanczos chain length as well as with medium-sized correlation consistent basis sets supplemented with a limited number of continuum-like Gaussian functions. Such features suggest the applicability of the method to larger systems.

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