Non-Fullerene Acceptors in Organic Solar Cells – Some new Insights

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In recent years, non-fullerene acceptors (NFAs) have attracted a lot of attention, because organic solar cells (OSC) based on NFAs have better performance than previous PCBM-based (soluble fullerene) devices. Despite of their excellent performance in OSCs, sometimes only irreversible reduction in cyclic voltammetry (CV) is reported for some of the most reliable NFAs, whereas the origin behind this remains unclear.
In this paper, we investigate the potential impact of this issue on device performance, in particular long-term stability. We use a combination of mass spectrometry (MS) and CV.