
In architectural gilding, a range of materials and techniques have historically been utilized to accomplish intricate decorative schemes. Yet due to changes in use of building interiors, stylistic changes throughout history, and the difficulties of conserving deteriorated gilding, it is not uncommon to find that a once-gilded interior has been painted over. Current methods for investigating concealed metal leaf are destructive and sometimes inaccurate. This thesis explores the application of two non-destructive infrared technologies – infrared reflectography and infrared thermography – to the investigation of overpainted gilding. Infrared reflectography is often used in art conservation to examine underdrawings of paintings, while infrared thermography is frequently used to discern anomalies beneath the surfaces of historic facades. Finding efficient ways to apply these methods would enable conservators to locate hidden metal leaf and analyze architectural gilding in greater depth. It would also allow them to plan conservation treatments, make restoration decisions, and document significant interior finishes without damaging historic fabric.