

C_{60}^+ AND C_{60}^- IN NEON AND ARGON MATRICES

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Mass-selected C_{60} anions have been deposited in noble gas matrices (Ne,Ar) kept at 6K. The vibronic properties of the species (C_{60}^+ , C_{60}^0 , C_{60}^-) were determined by NIR and MID-IR absorption spectroscopy. By co-depositing electrons without the addition of electron scavengers or donors to the host matrix, we were able to vary the C_{60}^+/C_{60}^- ratio. By changing the C_{60}^+/C_{60}^- ratio, previously known vibrational data of the C_{60}^+ and C_{60}^- species could be confirmed and also extended further. DFT calculations performed on isolated C_{60}^+ and C_{60}^- ions support the experimental assignment.