INTERSTELLAR MATTER IN THE LABORATORY - PAHS FROM A BURNER

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In order to produce laboratory analogues of the carbonaceous cosmic dust, a new chemical reactor has been built at the Laboratoire de Photophysique Moléculaire in Orsay, France. A low pressure flat burner provides flames of premixed hydrocarbon/oxygen gas mixtures, closely following the model system used by the combustion community. The flame is a one-dimensional chemical reactor offering a broad range of combustion conditions and sampling, allowing production of many and various reaction products. A description of the apparatus will be given, followed by preliminary results on the REMPI-TOFMS spectroscopy of various polycyclic aromatic species formed in the reactor.