

## Universal Display's Description of Alleged Invention in EP-1449238:

Filing dated September 29, 2011:

1. "The present invention, for the first time, makes it possible to produce highly efficient devices, dramatically outpacing the efficiencies of existent fluorescent and phosphorescent devices. This was nothing other than a dramatic breakthrough, opening a new field of OLED technology for commercially relevant devices."

Filing dated December 18, 2012:

2. "*The invention is... not an emitter compound.*"  
[Full Quote:] "*The invention is an OLED, not an emitter compound.*"
3. "...phosphorescent OLEDs were also described in the literature before the priority date of the patent..."
4. "...the Opponents appear to opine, that the patent is directed to the provision of certain chemical species. This is, however, incorrect. The contribution of the present invention to the prior art is the disclosure of a technical device, namely an OLED, which emits light by phosphorescence. The invention is not, *per se*, directed to the disclosure of compounds which are phosphorescent. Said device is defined in the claims by the type of emissive material used to produce the light emission of the device."
5. "The teaching of the present patent, i.e. the provision of OLEDs comprising organometallic iridium compounds as emitters, constitutes a technical breakthrough which opened a new field of OLED technology for commercially relevant devices."
6. "...the objective technical problem to be solved is the provision of a class of compounds which can function as phosphorescent emitters with a high degree of efficiency when used in OLEDs... it is abundantly clear that the objective technical problem to be solved by the present patent is definitely not, as the Opponents allege, the provision of an alternative emitter."
7. "...no other class of phosphorescent compounds... could be regarded as an alternative to the organometallic iridium compounds...."
8. "...the provision of OLEDs comprising organometallic iridium emitters is a technological breakthrough."
9. "The core of the present invention is the finding that phosphorescent organometallic iridium complexes have the potential to outperform the efficiencies known from any prior art device when they are incorporated into an OLED."

10. “It is self-evident and has ever been self-evident to a skilled person that the structure and materials of the OLED should be suitably selected in order to take full advantage of any emitter’s potential to achieve high external quantum efficiencies. This, however, does not mean that the structure and materials of the OLED are essential features of the invention...”
11. “...a class of phosphorescent emitters having the following photophysical properties: [1] a short phosphorescence lifetime, [2] a very high phosphorescent quantum yield, and, [3] the emission originates exclusively from the long-lived triplet state, which increases the theoretical efficiency limit up to 100%, as no fluorescence is observed.”