The path to the Quantized Bohr Atom

(1) **Black Body Radiation's distribution of wave lengths** requires \( E = hf \)
for **EMAG Radiation**, \( E \) = \( 6.6 \times 10^{-34} \text{ J-sec} \)
- Max Planck

(2) **Photo-Electric emission of electrons from metals by E-Mag radiation** (especially \( E \) = constant of \( I \) & \( f \) proportional to \( f \)) requires **LIGHT to be PARTICLE-LIKE**
with photons of \( E = hf \) & \( p = hf/c \)
- A. Einstein

A. Bohr:
(3) **Discrete Emission & Absorption frequencies of atoms requires that**
**ONLY CERTAIN e- orbits around nucleus are allowed**: namely, those
with \( r \cdot p = \frac{n \cdot h}{2\pi} \leftrightarrow 2\pi r = n \cdot \frac{h}{p} \)

**SAME Planck's constant** \( h = 6.6 \times 10^{-34} \text{ J-sec} \)
across in each case!