

- 1 Gorilla Glass
Corning
Tough glass used in cell phones and displays.
Could include info on Willow glass (flexible)
- 2 Giant Magneto Resistance (GMR)
Albert Fert and Peter Grunberg **Nobel prize physics 2007**
revolutionized readback heads in disk drives
- 3 Magnetic Resonance Imaging
Raymond Damadian, Paul Lauterbur or Peter Mansfield
(all did important pieces of this)
Fonar Corporation and patent rulings with General Electric
- 4 OLED (organic light emitting diodes)
Ching Tang, Kodak
Universal Display Corporation – licenses to Samsung, LG, etc
- 5 Nitinol “muscle wire” (shape memory material)
William Buehler, Frederick Wang
applications in robotics, medical devices, glasses frames, actuators
NDC, Inc (Nitinol Devices and Components, Inc)
- 6 blue LEDs
Akasaki, Amano, Nakamura, **Nobel prize 2014 in physics**
Nichia Corporation
- 7 quantum dots
Louis Brus, Mark Reed
Dow, Nanoco, Nanosys
- 8 magnetic nanoparticles
useful for drug delivery, cancer treatment, catalysis, biomedicine
don't know what companies are developing, lots of research info out there
- 9 UPC barcode development
Bernard Silver, Normand Woodland, Drexel
IBM, RCA, railroad industry
- 10 RFID
Toll collection (EZ Pass) Kapsch TrafficCom
animal IDs
supply chain management (Walmart)

- 11 CCD imaging devices
Willard Boyle, George Smith, **Nobel prize in physics 2009**
ATT Bell Labs
Philips Research, Michael Tompsett
- 12 NdFeB magnet development
General Motors, Sumitomo Special Metals 1983
Koon, Croat
- 13 high Tc superconductors
Muller and Bednorz, IBM Switzerland
Nobel in physics 1987
- 14 SQUID (Superconducting QUantum Interference Device)
Jaklevic, Lambe, Mercereau & Silver at Ford Research Labs
used for very high sensitivity magnetometry for biological systems as well
as materials characterizations. Oil & mineral prospecting, quantum computation
- 15 nematic liquid crystals used in LCD displays
Richard Williams at RCA Labs, de Gennes **Nobel prize in physics 1991**
- 16 wireless power transmission
Witricity, MIT
resonant magnetic coupling
- 17 carbon fiber
Carbon reinforced composites for high strength low weight applications
Zoltek carbon fiber for marine applications (sailboat masts) and others
Hexcel, Tenax, original patents by Bacon at Union Carbide
- 18 Fiber Optic communications, couplers, cables
Kao and Hockham, STC labs
Corning
InGaAs photodiode, Pearsall at Bell Labs
- 19 Ink Jet printing technology – Thermal or Piezoelectric Drop on Demand
Vaught at HP, Endo at Canon
Elmqvist of Siemens, Sweden
Zoltan, Kyser, Sears at Siemens
- 20 ???? some other technology that interests you ! (talk to me)