Printed, Organic & Flexible Electronics Forecasts, Players & Opportunities 2017-2027

Description: This report provides the most comprehensive view of the topic, giving detailed ten year forecasts by device type. The market is analyzed by territory, printed vs non printed, rigid vs flexible, inorganic vs organic, cost of materials vs process cost and much more. Activities of over 1,000 leading companies are given, as is assessment of the winners and losers to come.

Impartial Assessment

In the report the author appraises each enabling technology component by virtue of its market need - not technology push. We draw on ten years of knowledge tracking this sector and provide detailed, refined forecasts, strategic positioning and assessment of trends, "hot topics" and unmet opportunities.

The Big Picture

The report specifically addresses the big picture - including OLED displays and lighting, to thin film photovoltaics to flexible sensors and much more. Importantly, it includes not only electronics which are printed, organic and/or flexible now, but it also covers those that will be. Realistic timescales, case studies, existing products and the emergence of new products are given, as are impediments and opportunities for the years to come.

Over 3,000 organizations are pursuing printed, organic, flexible electronics, including printing, electronics, materials and packaging companies. While some of these technologies are in use now - indeed there are three sectors which have created billion dollar markets - others are commercially embryonic.

The benefits of these new electronics are numerous - ranging from lower cost, improved performance, flexibility, transparency, reliability, better environmental credentials and much more. Many of the applications will be newly created, and where existing electronic and electrical products are impacted, the extent will be varied.

This widely referenced report brings it all together, with particular focus on applications and quantitative assessment of opportunities.

Market Size From 2017-2027

The author's find that the total market for printed, flexible and organic electronics will grow from $29.28 billion in 2017 to $73.43 billion in 2027. The majority of that is OLEDs (organic but not printed) and conductive ink used for a wide range of applications. On the other hand, stretchable electronics, logic and memory, thin film sensors are much smaller segments but with huge growth potential as they emerge from R&D.

Lessons, Successes and Opportunities

The following components are assessed, and for each one ten year forecasts are given, along with companies and their activities, case studies, impediments to commercialization and timescales:

- Logic and memory
- OLED displays
- OLED lighting
- Electrophoretic and other bistable displays
- Electrochromic displays
- Electroluminescent displays
- Other displays
- Thin film batteries
- Photovoltaics
- Sensors
If you are looking to understand the big picture, the opportunity, the problems you can address, or how you can start to use these technologies and the implications involved, this report is a must. Researched by multilingual consultants based in four countries and three continents, this report builds on ten years of knowledge of the industry.

Contents:

1. EXECUTIVE SUMMARY AND CONCLUSIONS
   1.1. Definitions
   1.2. Market Potential and Profitability
   1.3. Current market size
   1.4. Total market size 2017 to 2027
   1.5. Value chain and investment
   1.6. Organic versus inorganic electronics
   1.7. Printed versus non-printed electronics
   1.8. Flexible/conformal versus rigid electronics
   1.9. Market by territory
   1.10. The long term view
   1.11. The value chain and unmet needs
   1.12. Go to Market Strategies
   1.13. Printed electronics needs new design rules
   1.14. What end users want - results from 20 end user surveys
   1.15. Successes, failures and repositioners
   1.16. What is trending in Printed Electronics?

2. MARKET DRIVERS FOR PRINTED ELECTRONICS
   2.1. Printed, Organic and Flexible Electronics Value
   2.2. Key materials and components
   2.3. 3,000 organisations active in the field
   2.4. Printed electronics products today
   2.5. Printed electronics in the Retail Industry
   2.6. Problems in Healthcare
   2.7. Problems with Wearable Technology
   2.8. Problems with Vehicles
   2.9. Problems in Consumer Electronics, IoT etc
   2.10. Highest volume products with no silicon chip

3. CONDUCTIVE INKS
   3.1. Conductive inks forecasts 2017-2027
   3.2. Traditional markets
      3.2.1. Photovoltaics
      3.2.2. Touch screen market
   3.3. Emerging applications
      3.3.1. 3D antennas
      3.3.2. In-mold electronics
      3.3.3. ITO replacement
      3.3.4. Stretchable inks
      3.3.5. Desktop printing
      3.3.6. 3D printed electronics
      3.3.7. Other

4. LOGIC AND MEMORY
   4.1. Logic and memory market forecasts 2017-2027
   4.2. Logic and memory applications
   4.3. Impact on silicon
   4.4. Fools underestimate silicon
   4.5. Transistor design
   4.6. The main options for semiconductors
      4.6.1. What reads to most of the potential strengths of printed transistors
      4.6.2. Primary market focus of developers
      4.6.3. Organic Semiconductors
4.6.4. Oxide Semiconductors
4.6.5. Carbon Nanotubes and Graphene Transistors
4.6.6. Company strategy and value chain
4.7. Memory
4.8. Company profiles
4.8.1. PragmatIC Printing
4.8.2. SmartKem
4.8.3. Thin Film Electronics

5. DISPLAYS
5.1. Market drivers
5.2. OLED Displays
5.2.1. Why companies are making significant investments in OLEDs
5.2.2. OLED Technologies and Roadmap
5.2.3. Examples of OLED Products
5.2.4. OLED production capacity
5.2.5. Flexible OLED displays
5.2.6. OLED market forecasts 2017-2027
5.2.7. Printing OLEDs
5.3. Electrophoretic and other bi-stable displays
5.3.1. Applications of E-paper displays
5.3.1. Electrophoretic e-readers decline - what's next?
5.3.2. New players in Reflective BiStable Displays
5.3.3. Electrowetting displays
5.3.4. Electrophoretic and Bi-Stable displays market forecasts 2017-2027
5.4. Electrochromic displays
5.4.1. Electrochromic displays market forecasts 2017-2027
5.5. AC Electroluminescent displays
5.5.1. Electroluminescent displays market forecasts 2017-2027
5.6. Other display technologies
5.6.1. Thermochromic
5.6.2. Flexible LCDs
5.7. Company profiles
5.7.1. Clearinks Displays
5.7.2. eMagin Corporation
5.7.3. Royole Corporation
5.7.4. Sharp Devices Europe GMBH

6. OLED AND LED LIGHTING
6.1. Value proposition of OLED vs. LED lighting
6.2. OLED Lighting - market analysis
6.2.1. Cost projection
6.2.2. Latest market announcements
6.2.3. Technology Progress
6.2.4. OLED Market penetration
6.2.5. OLED Lighting Value Chain
6.2.6. OLED market forecast 2017-2027
6.2.7. Printed LED Lighting

7. PHOTOVOLTAICS
7.2. Printing in Crystalline Silicon PV
7.3. Thin Film Photovoltaics
7.3.1. Amorphous Silicon
7.3.2. CdTe
7.3.3. CIGS
7.3.4. DSSCs
7.3.5. Organic PV
7.3.6. Perovskites
7.4. Market trends and forecasts
7.5. Company profiles
7.5.1. Alta Devices
7.5.2. Armor
7.5.3. Dyesol
7.5.4. G24 Power Ltd
7.5.5. Heliatek GmbH
7.5.6. Oxford Photovoltaics

8. BATTERIES
8.1.1. Importance of laminar batteries
8.1.2. Choices of laminar battery
8.2. Application roadmap
8.3. Printed Single-Use Batteries
8.3.1. Construction
8.3.2. Fraunhofer ENAS
8.3.3. Enfucell
8.3.4. Blue Spark Technology
8.4. Printed Rechargeable Battery
8.4.1. Rechargeable ZincPolyTM from Imprint Energy
8.4.2. Screen printed secondary zinc/nickel metal hydride batteries
8.5. Technology Comparison and Benchmarking
8.6. Printed batteries forecasts 2017-2027

9. SENSORS AND OTHER ELECTRONIC COMPONENTS
9.1. Definitions
9.2. Printed and flexible sensors forecasts 2017-2027
9.2.1. Biomedical sensors
9.2.2. Touch sensors
9.2.3. Force and pressure sensors
9.2.4. Light/image sensors
9.2.5. Gas sensors
9.2.6. Temperature sensors
9.3. Printed and flexible sensor forecasts by application
9.4. Company profiles
9.4.1. BeBop Sensors
9.4.2. Interlink Electronics
9.4.3. InVisage Technologies
9.4.4. ISORG
9.4.5. Parker Hannifin
9.4.6. PST Sensors
9.4.7. Sensitronics
9.4.8. SPEC Sensors, LLC
9.4.9. Tactonic Technologies
9.4.10. Tangio Printed Electronics

10. MARKET BY TERRITORY, COMPONENTS, MATERIALS, OPPORTUNITIES
10.1. Market by territory
10.2. Geographical split 2017-2027
10.3. The total market opportunity by component
10.4. Organic versus Inorganic
10.5. Printed versus non-printed electronics
10.6. Flexible/conformal versus rigid electronics
10.7. Market forecasts for materials 2017-2027

11. PROFILES OF MATERIALS AND EQUIPMENT COMPANIES
11.1. Acreo Swedish ICT AB
11.2. Agfa-Gevaert N.V.
11.3. BASF
11.4. CERADROP, a MGI Group company
11.5. Cetemmsa
11.6. Coatema Coating Machinery
11.7. CPI
11.8. DuPont
11.9. FUJIFILM
11.10. GSI Technologies LLC
11.11. Heraeus GmbH
11.12. Holst Centre
11.13. Kateeva
11.14. Merck KGaA
11.15. Meyer Burger
11.16. Molex (Soligie)
11.17. Nagase America Corporation
11.18. National Research Council Canada
11.19. Novacentrix
11.20. Optomec
11.21. Toppan Printing
11.22. VTT Technical Research Centre of Finland

Ordering:

Order Online - http://www.researchandmarkets.com/reports/4031691/

Order by Fax - using the form below

Order by Post - print the order form below and send to

Research and Markets,
Guinness Centre,
Taylors Lane,
Dublin 8,
Ireland.
Fax Order Form
To place an order via fax simply print this form, fill in the information below and fax the completed form to 646-607-1907 (from USA) or +353-1-481-1716 (from Rest of World). If you have any questions please visit http://www.researchandmarkets.com/contact/

Order Information
Please verify that the product information is correct and select the format(s) you require.

<table>
<thead>
<tr>
<th>Product Name:</th>
<th>Printed, Organic &amp; Flexible Electronics Forecasts, Players &amp; Opportunities 2017-2027</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web Address:</td>
<td><a href="http://www.researchandmarkets.com/reports/4031691/">http://www.researchandmarkets.com/reports/4031691/</a></td>
</tr>
<tr>
<td>Office Code:</td>
<td>SC</td>
</tr>
</tbody>
</table>

Product Formats
Please select the product formats and quantity you require:

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic (PDF) - 1 - 5 Users</td>
<td>USD 5553</td>
</tr>
<tr>
<td>Electronic and Hard Copy (PDF) - 1 - 5 Users</td>
<td>USD 5857 + USD 56 Shipping/Handling</td>
</tr>
<tr>
<td>Electronic (PDF) - 1 - 10 Users</td>
<td>USD 8315</td>
</tr>
<tr>
<td>Electronic and Hard Copy (PDF) - 1 - 10 Users</td>
<td>USD 8619 + USD 56 Shipping/Handling</td>
</tr>
</tbody>
</table>

* Shipping/Handling is only charged once per order.

* The price quoted above is only valid for 30 days. Please submit your order within that time frame to avail of this price as all prices are subject to change.

Contact Information
Please enter all the information below in BLOCK CAPITALS

<table>
<thead>
<tr>
<th>Title:</th>
<th>Mr ☐ Mrs ☐ Dr ☐ Miss ☐ Ms ☐ Prof ☐</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Name:</td>
<td></td>
</tr>
<tr>
<td>Email Address: *</td>
<td></td>
</tr>
<tr>
<td>Job Title:</td>
<td></td>
</tr>
<tr>
<td>Organisation:</td>
<td></td>
</tr>
<tr>
<td>Address:</td>
<td></td>
</tr>
<tr>
<td>City:</td>
<td></td>
</tr>
<tr>
<td>Postal / Zip Code:</td>
<td></td>
</tr>
<tr>
<td>Country:</td>
<td></td>
</tr>
<tr>
<td>Phone Number:</td>
<td></td>
</tr>
<tr>
<td>Fax Number:</td>
<td></td>
</tr>
</tbody>
</table>

* Please refrain from using free email accounts when ordering (e.g. Yahoo, Hotmail, AOL)
Payment Information

Please indicate the payment method you would like to use by selecting the appropriate box.

☐ Pay by credit card: You will receive an email with a link to a secure webpage to enter your credit card details.

☐ Pay by check: Please post the check, accompanied by this form, to:
Research and Markets,
Guinness Center,
Taylors Lane,
Dublin 8,
Ireland.

☐ Pay by wire transfer: Please transfer funds to:
Account number 833 130 83
Sort code 98-53-30
Swift code ULSBIE2D
IBAN number IE78ULSB98533083313083
Bank Address Ulster Bank,
27-35 Main Street,
Blackrock,
Co. Dublin,
Ireland.

If you have a Marketing Code please enter it below:

Marketing Code: ____________________________

Please note that by ordering from Research and Markets you are agreeing to our Terms and Conditions at http://www.researchandmarkets.com/info/terms.asp

Please fax this form to:
(646) 607-1907 or (646) 964-6609 - From USA
+353-1-481-1716 or +353-1-653-1571 - From Rest of World