

# OTFTs, OFETs and Organic Memory Markets– 2012

<https://marketpublishers.com/r/O6687D9FAE0EN.html>

Date: August 2012

Pages: 91

Price: US\$ 995.00 (Single User License)

ID: O6687D9FAE0EN

## Abstracts

Improved materials and new applications have brought a renaissance of interest in the commercialization of transistors and memories built from organic materials. This NanoMarkets report provides an analysis and forecast of the OTFT/OFET and organic memory markets over the next eight years. In this report, we identify where the genuine performance improvements in these devices are occurring and how fast they can be expected to grow in process power and storage in the future. This analysis is provided through an in-depth assessment of current commercialization efforts for OTFT/OFETs, memories and related organic “chips.” This study also provides a complete exploration of the markets in which OTFT/OFETs and organic memories can be expected to generate new business revenues. These include a rapidly growing list of low-performance electronics applications such as smart packaging, interactive media and tagging. We also discuss, whether – as was once expected of OTFT/OFETs -- these devices will serve as a key enabling technology for flexible displays. This report contains a detailed eight-year volume and value forecast of shipments of products with organic “chips” inside. It also includes an eight-year forecast of the materials required for next generation organic transistors and memories. Finally, this report includes NanoMarkets’ assessments of the strategies of key firms and research institutions active in this area. - See more at: [http://nanomarkets.net/market\\_reports/report/otfts\\_ofets\\_and\\_organic\\_memory\\_markets\\_2012#sthash.sijeMV01.dpuf](http://nanomarkets.net/market_reports/report/otfts_ofets_and_organic_memory_markets_2012#sthash.sijeMV01.dpuf)

## Contents

### EXECUTIVE SUMMARY

- E.1 Taking Organic/Printed Logic and Memory Seriously: Lessons from the Success of the OLED Industry
  - E.1.1 Increased Activity and Renewed Optimism
  - E.1.2 How the Success of OLEDs May Help Organic Logic and Memory
- E.2 Key Opportunities for Organic Logic and Memory
  - E.2.1 Low-Performance Electronics Applications
  - E.2.2 Organic Backplane Applications
- E.3 Materials Needs for Organic Logic and Memory
  - E.3.1 Expanded Markets Through Higher Mobility Semiconductors
  - E.3.2 And...It All Has to Be Solution-Processable
- E.4 Players to Watch: Pioneers and What's Next
  - E.4.1 Materials Suppliers
  - E.4.2 Logic and Memory Firms
  - E.4.3 Display Manufacturers to Watch
- E.5 Summary of Eight-Year Forecasts for Organic/Printed Logic and Memory

### CHAPTER ONE: INTRODUCTION

- 1.1 Background to This Report
  - 1.1.1 A Changing Landscape—Finally
  - 1.1.2 But...Success is Far from Certain
- 1.2 Objectives and Scope of This Report
- 1.3 Methodology of this Report
- 1.4 Plan of This Report

### CHAPTER TWO: ORGANIC TRANSISTORS AND MEMORIES: DEVICES AND MATERIALS

- 2.1 Industry Trends
  - 2.1.1 Industry Cooperation
  - 2.1.2 OTFT/OFET Mobility Trends
  - 2.1.3 Trends in Polymer/Organic Memory
- 2.2 Critical Materials Developments Enabling Maximum Performance at Low Cost
  - 2.2.1 Materials Choices
  - 2.2.2 Organic “CMOS”: Now a Real Possibility

- 2.2.3 The Promise of Room Temperature Solution Processing and Printing
- 2.2.4 Ink and Coating Formulations Suitable for Manufacturing
- 2.2.5 The Link Between Solution Processability and Thermal Stability
- 2.2.6 Encapsulation Matters
- 2.3 Commercialization Patterns for Organic Transistors and Memories
- 2.4 Key Points Made in this chapter

## **CHAPTER THREE: APPLICATIONS AND EIGHT-YEAR FORECASTS OF OTFT/OFETS AND ORGANIC MEMORIES**

- 3.1 Key Drivers for the Printed/Organic Device Markets
  - 3.1.1 Drivers for Printed/Organic Logic and Memory
  - 3.1.2 Technology is Still Important
- 3.2 Forecasting Methodology and Assumptions
  - 3.2.1 Methodology and Information Sources
  - 3.2.2 Factors Influencing the Rate of Commercialization of OTFT/OFET and Organic Memory
  - 3.2.3 Device Performance and the Link to Addressable Market Size
  - 3.2.4 Economic Assumptions
  - 3.2.5 Pricing Assumptions
- 3.3 Smart Packaging Markets: Eight-Year Forecasts of OTFTs/OFETs and Organic Memory
  - 3.3.1 Food and Personal Care Smart Packaging Applications
  - 3.3.2 Pharmaceutical and Healthcare-Related Smart Packaging
  - 3.3.3 Summary of Eight-Year Forecasts for OTFTs/OFET and Organic Memory in Smart Packaging
- 3.4 Brand Image and Security Applications: Eight-Year Forecasts of OTFTs/OFETs and Organic Memory
- 3.5 Distribution Tagging: Eight-Year Forecasts of OTFTs/OFETs and Organic Memory
- 3.6 Smartcards: Eight-Year Forecasts of OTFTs/OFETs and Organic Memory
- 3.7 Interactive Media and Disposable Electronics: Eight-Year Forecasts of OTFTs/OFETs and Organic Memory
- 3.8 Display Backplanes: Eight-Year Forecast of OTFTs/OFETs and Organic Memory
- 3.9 Summary of Eight-Year Forecasts for Organic/Printed Logic and Memory
  - 3.9.1 OTFT/OFET and ONVM Component Forecasts by Application
  - 3.9.2 Forecast of Overall Device Market Enabled by Organic/Printed Logic and Memory
- 3.10 Material Forecasts
- 3.11 Alternative Scenarios

## Acronyms and Abbreviations Used in This Report

## About

### ABOUT THE AUTHOR

## List Of Exhibits

### LIST OF EXHIBITS

Exhibit E-1: Overview of Prospects for Low-Performance Applications for Organic/Printed Logic and Memory

Exhibit E-2: Summary of Market Value of OTFT/OFET and ONVM Markets by Application and by Component 2012-2019 (\$ Millions)

Exhibit E-3 Projected Market Value of Organic/Printed Logic- and Memory-Enabled Applications 2012-2019 (\$ Millions)

Exhibit 2-1: OTFT/OFET Device Performance Trends

Exhibit 2-2: Issues Facing the OTFT/OFET and Organic Memory Business in 2012-2014

Exhibit 2-3: Three Applications That Could Lead to Profitability in the Printed/Organic Logic and Memory Sector

Exhibit 3-1: Pricing Estimates for OTFT/OFETs and ONVM Components 2012-2019

Exhibit 3-2: Analysis of Food and Personal Care Smart Packaging\* Applications 2012-2019

Exhibit 3-3: Analysis of Pharmaceutical and Healthcare-Related Smart Packaging\* Applications 2012-2019

Exhibit 3-4: Summary of Quantity and Market Value of OTFT/OFET Components in Smart Packaging 2012-2019

Exhibit 3-5: Summary of Quantity and Market Value of ONVM Components in Smart Packaging 2012-2019

Exhibit 3-6: Summary of Quantity and Market Value of Organic/Printed Electronic Components in Smart Packaging 2012-2019

Exhibit 3-7: Analysis of Security and Brand Protection\* Applications 2012-2019

Exhibit 3-8: Analysis of Distribution Tagging Applications\* for Organic and Printed Electronics 2012-2019

Exhibit 3-9: Analysis of Smartcard Applications\* for Organic and Printed Electronics 2012-2019

Exhibit 3-10: Analysis of Interactive Media\* Applications for Organic/Printed Electronics 2012-2019

Exhibit 3-11: Analysis of OTFT/OFET Display Backplane\* Applications 2012-2019

Exhibit 3-12: Summary of Market Value of OTFT/OFET-Only Markets by Application 2012-2019 (\$ Millions)

Exhibit 3-13: Summary of Market Value of ONVM-Only Markets by Application 2012-2019 (\$ Millions)

Exhibit 3-14: Summary of Market Value of OTFT/OFET and ONVM Markets by

Application 2012-2019 (\$ Millions)

Exhibit 3-15: Projected Market Value of Organic/Printed Logic- and Memory-Enabled Applications 2012-2019 (\$ Millions)

Exhibit 3-16: Analysis of Materials for Organic/Printed OTFT/OFET and Organic Memory 2012-2019

## I would like to order

Product name: OTFTs, OFETs and Organic Memory Markets– 2012

Product link: <https://marketpublishers.com/r/O6687D9FAE0EN.html>

Price: US\$ 995.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/O6687D9FAE0EN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:  
Last name:  
Email:  
Company:  
Address:  
City:  
Zip code:  
Country:  
Tel:  
Fax:  
Your message:

**\*\*All fields are required**

Customer signature \_\_\_\_\_

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970