

PROJECTS

8

PREFACE
HOW PAPER UNFOLDS
Petra Schmidt and Nicola Stattmann

14

A

AMBE, NORIKO .014
ATELIER OI .016
ATOPOS .018

B

BACKLUND, SANDRA .020
BALL-NOGUES STUDIO .022
BAN, SHIGERU .026
BAN, SHIGERU & ARTEK .030
BEUTLER, MICHAEL .032
BHÖMER, MARLOES TEN .034
BOSSE, CHRIS .036
BRADLEY, ZOE .038
BRUKETA & ŽINIĆ .040
BUETTI, DANIELE .041

C

CALLESEN, PETER .042
CHALAYAN, HUSSEIN .044
COTTRELL & VERMEULEN .046
CULLIN, MIA .048

D

DARCH STUDIO .049
DAVIDSON, CHARLIE .050
DEMAND, THOMAS .052
DIEZ, STEFAN .058

E

ELIASSEN, OLAFUR .060
ESLAVA, LUIS & RAMOS, DIEGO .062

F

FESER, CHRISTIANE .064
FRITZ, OLIVER & PAWLOFSKY, TOM .068
FUKASAWA, NAOTO .070

G

GAO, YING .072
GEHRY, FRANK .074
GRCIC, KONSTANTIN .076
GWON, OSANG .080

H

HAPTIC—AWAKENING THE SENSES .084
HASSENFELD, KIRSTEN .088
HAUSSWOLFF, ANNIKA VON .090
HOOF, JAN VAN .092
HUTTEN, RICHARD .094

K

KAISIN, CHARLES .095
KALLIALA, MARTTI & RUSKEPÄÄ, ESA .096
KOCKS, ANDREAS .098
KYOEI DESIGN .102

L

LANG, ROBERT J. .103
LIBERTINY, TOMÁŠ GABZDIL .104
LIM, CJ / STUDIO 8 ARCHITECTS .106

M

MAISON MARTIN MARGIELA .107
MARCH STUDIO .108
MEIJER, MIEKE .110
MIYAKE DESIGN STUDIO .112
MIYAKE DESIGN STUDIO & TOMLINSON, MARCUS .114
MOLO DESIGN .116
MURKUDIS, KOSTAS & NICOLAI, CARSTEN .117

N

NAKAMURA, RYUJI .118
NAKAO, JUM .120
NENDO .124
NICOLA FROM BERN .126

P

PRAET, JENS .128
PRIESTMAN GOODE .129

R

RASMUSSEN, HEATHER .130
RAW-EDGES .132
REHBERGER, TOBIAS .134
RESCH, RON .136
RO&AD ARCHITECTEN .140
ROUIT, MARINE .141

S

SACK, ADRIENNE .142
SEMPÉ, INGA .144
SHAPIRO, CYGALLE .146
SOUNDS OF SILENCE .148
STADELMANN, MARIO .150
STEERLYNCK, DIANE .151
STÖCKEL, TOMMY .152
SUZUKI, SHINJI & TODA, TAKUO .154
SWEENEY, RICHARD .156

T

TT:NT .160

V

VOERMAN, ROB .162

W

WORK AC .164

Y

YOSHIOKA, TOKUJIN .166
YOUNG, MICHAEL .168

MATERIALS AND TECHNOLOGIES

170

INNOVATIVE PAPER AND MANUFACTURING PROCESSES
FOR INTELLIGENT LIGHTWEIGHT CONSTRUCTION
Nicola Statmann and Mareike Gast

176

PRODUCTION .176

Wasps' nest/Cellulose and pulp/Paper production/
Washi/Nanopaper

MODIFIED .180

Siliconized kraft paper/Glow-in-the-dark paper/
Transparent paper/Haptic Paper Cup/
Waterproof paper/Folded paper cups/Bamboo paper/
Biopolymers and paper/Tear-proof paper

OUTDOOR PAPER .186

Breathable paper/Weatherproof paper/
Folded constructions

LAYERED PAPER .188

Vulcanized paper/
Paper-based Laminated Object Manufacturing (LOM)/
Transparent construction panels from cellulose/
Pressed cellulose panels/Paper fiber panel

CHEMICALLY ACTIVE .192

Photo-catalyst, air-purifying paper/
Antibacterial paper/
Paper with thermochromic fibers/
Indicator paper

SINTERED .194

Ceramic paper/Ceramic paper experiments/
Laminated Object Manufacturing (LOM)
for ceramic prototypes/Silver origami

FIRE-RESISTANT AND CLEANING .198

Glass fiber paper/
Fire-resistant ceramic fiber paper/
Haptic Humidifier/Technical filter paper

ELECTRONIC .200

Carbon fiber paper/Polytronics/Insulating paper/
Pulp-based computing/Bucky Paper

TEXTILES .206

Silk paper fabric/Paper wall hanging/
Paper rug/Yarn from waste paper/
Water-resistant paper strings/
Paper fleece-like fiber functional textile (Tyvek)/
Woven paper fabric/Crocheted paper textiles

COMPOSITES AND LAMINATES .214

Wood veneer fleece/Oil kraft paper/
Tear-resistant and laminated washi paper/
Algae bowl

DEEP-DRAWN .216

Vault-structured paper/Deep-drawn paper

HONEYCOMB STRUCTURES .218

Honeycomb paper/Honeycomb panels and
3D honeycomb structures/
Products made of honeycomb paper

HONEYCOMB MOLDED PARTS .222

Solid honeycomb panel/
Curved honeycomb panels for molded parts/
Corrugated honeycomb panel with changing
corrugation sizes

CNC-MADE HONEYCOMBS .224

CNC honeycomb lamp

FOAM MOLDED .226

Paper foam/Paper foam made of waste paper/
Fire-resistant paper and cardboard by means
of crystal technology

MOLDED PULP .230

Molded pulp/Sugar paper/
Corrugated cardboard with molded corrugations

STRUCTURAL ELEMENTS .234

Structural profile made of waste labels/
Cardboard profiles/
Structural element for the Cardboard Dome

ORIGAMI IN PRODUCTION .238

Pleated paper/Origami tessellations/
Knotology and Snapology/Modular origami

COMPUTATIONAL ORIGAMI .240

Origami robots/Curved CAD/CAM folds/
Computational origami

LASER-CUT .242

Laser-cutting with copper template/
CNC-controlled laser-cutting of paper/
Your House

245

BRIEF DESCRIPTIONS/BIOGRAPHIES

252

ABOUT THE AUTHORS/ACKNOWLEDGEMENTS

254

PICTURE CREDITS